

Transportation Indicators

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Indicators

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Introduction

This report is intended to provide timely, easily accessible information for the transportation community. It was developed by the Bureau of Transportation Statistics (BTS) of the U.S. Department of Transportation (DOT), and is updated each month on the BTS website (www.bts.gov).

Each indicator is placed under a heading corresponding to one of the five strategic goals of DOT — safety, mobility, economic growth, environment, and national security. Some indicators are related to more than one strategic goal.

The indicators fall under two broad categories: those that provide context about the economy and society in which transportation functions, and those that convey information about an aspect of transportation. To the extent possible, these latter indicators are transportation-wide in scope; however, some apply to only part of the transportation system. Reference tables at the beginning of the document provide key statistics about U.S. social and economic characteristics, and about the extent of the transportation system.

For indicators that are highly seasonal, the current value of that indicator is compared to the same time period in the previous year (e.g., April 2001 compared to April 2000). Otherwise, the tables show a comparison of the current value to a comparable preceding period of time (e.g., the data for the month of April 2001 compared to that of March 2001).

BTS would like feedback about this report. Please send comments to:

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Highlights – January 2002

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Tonnage shipped in U.S. inland waterways was nearly 12 percent higher in December 2001 than December 2000.	36
© Consumer prices for gasoline (all types) fell almost 6 percent between November and December 2001.	50
Producer prices for crude petroleum in December 2001 were 45 percent lower than in December 2000, while producer prices	51,90
for petroleum products were 36 percent lower. However, world crude oil prices have increased recently—rising 2 percent in	
the first week of January 2002 and another 2 percent the following week.	
Producer prices for highway and street construction declined nearly 4 percent from December 2000 to December 2001—	58
their lowest level in almost 10 years.	
Employment in air transportation fell 2 percent between November and December 2001. There was also a 2-percent	63-64
decline in aircraft and parts manufacturing between November and December 2001. Since August 2001, 114,000 jobs have	
been lost in air transportation.	
Profits of for-hire transportation industries declined 73 percent in the third quarter of 2001, to less than one-quarter billion	74
dollars (seasonally adjusted).	
Manufacturers' new orders for transportation equipment declined 17 percent between October and November 2001,	82-83
while total manufacturing new orders declined just 3 percent.	
Production units of domestic light-truck assemblies rose 11 percent in November 2001 and 4 percent in December.	84
Production of medium and heavy truck assemblies declined 11 percent in November 2001, but increased 10 percent in December.	
Production of domestic car assemblies increased 5 percent in December.	



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The validity of these statements has not been statistically tested. BTS is testing a statistical monitoring process in order to apply statistical quality control techniques to the indicators data.



Summary of Social and Economic Characteristics of the United States: 1980-2000

	1980	1985	1990	1995	1996	1997	1998	1999	2000
Total U.S. resident population									
(thousands) ^a	227,225	237,924	248,791	262,803	265,229	267,784	270,248	272,691	276,059
Age (thousands) ^a									
Under 18	63,754	62,623	63,949	68,555	69,109	69,603	69,903	70,199	70,484
18-24 years	30,022	28,902	26,961	25,112	24,843	24,980	25,476	26,011	26,748
25-34	37,082	41,696	43,174	40,730	40,246	39,559	38,743	37,936	37,189
35-44	25,634	31,691	37,444	42,555	43,365	44,014	44,498	44,813	44,813
45-54	22,800	22,460	25,062	31,100	32,358	33,625	34,575	35,804	37,685
55-64	21,703	22,135	21,116	21,132	21,353	21,813	22,666	23,389	24,209
65 and over	25,550	28,415	31,083	33,619	33,957	34,185	34,385	34,540	39,301
Sex (thousands) ^b									
Male	110,053	116,160	121,284	128,294	129,504	130,783	132,030	133,277	134,979
Female	116,493	122,576	127,507	134,510	135,724	137,001	138,212	139,414	141,080
Metropolitan areas (population in millions)									
Large (over 1 million)	119	U	139	147	149	151	153	156	U
Medium (250,000-999,999)	41	U	41	44	44	43	43	43	U
Small (less than 250,000)	17	U	18	19	19	20	20	20	U
Rural v. urban areas (population in thousands)									
Rural	59,495	U	61,656	U	U	U	U	U	U
Urban	167,051	U	187,053	U	U	U	U	U	U
Regions (population in millions) ^c									
Northeast	49.1	49.9	50.8	51.4	51.6	51.6	51.7	51.8	U
South	75.4	81.4	85.5	91.8	93.1	94.2	95.3	96.5	U
Midwest	58.9	58.8	59.7	61.8	62.1	62.5	63.0	63.2	U
West	43.2	47.8	52.8	57.7	58.5	59.4	60.3	61.2	U
Immigrants admitted	530,639	570,009	1,536,483	720,461	915,900	798,378	660,447	U	U
Total area (square miles)	3,618,770	U	3,717,796	U	U	U	U	U	U

⁻Table continued on next page-



Summary of Social and Economic Characteristics of the United States: 1980-2000 (continued)

	1980	1985	1990	1995	1996	1997	1998	1999	2000
Gross Domestic Product (GDP)									
(chained \$ 1996 billions) ^d	4,901	5,717	6,708	7,544	7,813	8,160	8,516	8,876	9,319
Total civilian labor force (thousands) ^e	106,940	115,461	125,840	132,304	133,943	136,297	137,673	139,368	141,489
Participation rate of men	77.4%	76.3%	76.4%	75.0%	74.9%	75.0%	74.9%	74.7%	74.6%
Participation rate of women	51.5%	54.5%	57.5%	58.9%	59.3%	59.8%	59.8%	60.0%	60.2%
Unemployment rate	7.1%	7.2%	5.6%	5.6%	5.4%	4.9%	4.5%	4.2%	4.0%
Men	6.9%	7.0%	5.7%	5.6%	5.4%	4.9%	4.4%	4.1%	4.0%
Women	7.4%	7.4%	5.5%	5.6%	5.4%	5.0%	4.6%	4.3%	4.0%
Number of households (thousands)	80,776	86,789	93,347	98,990	99,627	101,018	102,528	U	U
Average size of households	2.76	2.69	2.63	2.65	2.65	2.64	2.62	U	U
Median household income									
(chained \$ 1996)	33,722	34,439	35,945	35,082	35,492	36,175	37,430	U	U
Families below poverty level (thousands)	6,217	7,223	7,098	7,532	7,708	7,324	7,186	U	U
Average household expenditures									
(chained \$ 1996)	U	34,253	34,070	33,217	33,797	34,038	34,205	U	U

KEY: U = Unavailable

SOURCES: 1980-1998 data: Multiple sources as cited in U.S. Department of Transportation, Bureau of Transportation Statistics, National Transportation Statistics 1999, Table A, p. xix.

 $\textbf{1999 Data: Population:} \ U.S. \ Department of Commerce, \ Bureau of the Census, available \\ at: \ http://www.census.gov.$

Immigration: U.S. Department of Justice, Immigration and Naturalization Services,

Annual Report: Legal Immigration FY 1998, available at:

http://www.ins.usdoj.gov/graphics/aboutins/statistics/index.htm.

GDP, Average household expenditure, Median household income:

U.S. Department of Commerce, Bureau of Economic Analysis.

Employment (1980-1999): U.S. Department of Labor, Bureau of Labor Statistics, available at: http://www.bls.gov/cpsatabs.htm.

Average Size of Households, Families below poverty level: U.S. Department of Commerce, Bureau of the Census, Statistical Abstract of the United States, 1999.



^a Estimates as of July 1 except 1980 and 1990, which are as of April 1, and 2000, which is as of November 1.

^b 1995 through 2000 data are estimates.

^c As of July 1 for all years except 1980 and 1990.

^d For definition of chained dollars, see page 40.

^e For 2000, as of December.

Transportation System Extent

Mode	Components (2000 data unless otherwise noted)
Highway	Public Roads
	46,675 miles of Interstate highway; 114,505 miles of other National Highway System roads
	3,951,098 miles of other roads
Air	Public-use airports
	5,317 airports
	Airports serving large certificated carriers
	29 large hubs ^a (72 airports), 479 million enplaned passengers
	31 medium hubs (53 airports), 102 million enplaned passengers
	54 small hubs (69 airports), 40 million enplaned passengers
	585 nonhubs (610 airports), 18 million enplaned passengers
Rail	Miles of road operated
	120,986 miles by Class 1 freight railroads ^b
	21,250 miles by regional freight railroads
	28,422 miles by local freight railroads
	22,741 miles by Amtrak (passenger), of which 750 miles are Amtrak owned
Urban transit	Directional route-miles serviced (1998)
	Bus: 157,823; Trolley bus: 424; Commuter rail: 5,172 Heavy rail: 1,527; Light rail: 676
	Stations
	Commuter rail: 972; Heavy rail: 987; Light rail: 555
Water	26,000 miles of navigable waterways
	276 locks; Ferry routes: 48
	Commercial Facilities
	Great Lakes: 611 deep; 143 shallow
	Inland: 2,367 shallow
	Coastal: 4,079 deep; 2,109 shallow
Pipeline (1999)	Oil
	Crude lines: 88,000 miles of pipe; Product lines: 91,000 miles of pipe
	Gas
	Transmission: 254,000 miles of pipe; Distribution: 981,000 miles of pipe

^aAs used here, a hub is defined as a geographic area based on the percentage of total enplaned passengers in that area. For example, a large hub is a geographical area serving 1 percent or more of all enplaned revenue passengers in U.S. certificated route carriers operating in U.S. areas. This definition should not be confused with airline usage of the term hub to describe "hub and spoke" route structures, or other definitions of hubs used by the Federal Aviation Administration focusing on traffic at individual airports.

SOURCES: U.S. Department of Transportation, Federal Highway Administration, *Highway Statistics* 2000 (Washington DC: 2001); USDOT, Federal Aviation Administration, *Administrator's Fact Book* 2000 (Washington, DC: 2001); USDOT, Bureau of Transportation Statistics, *National Transportation Statistics* 2000 (Washington DC: 2001), various tables; National Ferry Database, as of 10/10/00; and U.S. Army Corps of Engineers, Navigation Data Center, *The U.S. Waterway System - Transportation Facts*, December 2000.



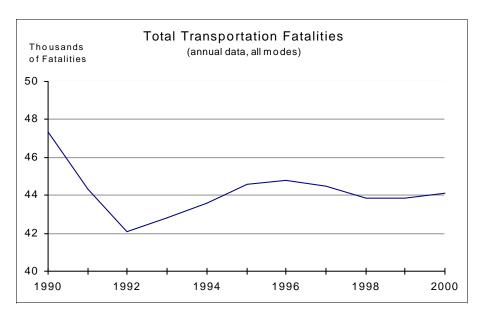
^b Includes 574 miles of road operated by U.S. Class 1 freight railroads in Canada.

Safety

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TRANSPORTATION FATALITIES: ALL MODES



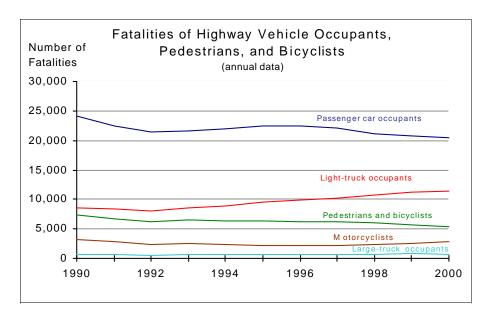
Fatalities represent the most severe safety consequence for the transportation system. In 2000, there were 44,105 transportation-related fatalities, compared to 47,348 in 1990.

See U.S. Department of Transportation, Bureau of Transportation Statistics, *National Transportation Statistics 2000*, pp. 429-435, for detailed discussion of modal fatality data.

Transportation Fatalities	1999	2000
Total	43,866	44,105
Percent change from previous year	-0.02	0.54

SOURCES: Data compiled from various government agencies as cited in the U.S. Department of Transportation (USDOT), Bureau of Transportation Statistics (BTS), *National Transportation Statistics 2000*. 2000 number compiled from various government agencies as cited in the USDOT, BTS, *Transportation Statistics Annual Report 2001* (in draft).

MOTOR VEHICLE-RELATED HIGHWAY FATALITIES



Highway crashes caused 94 percent of all transportation-related fatalities in 2000. They were the leading cause of death of people ages 5 through 29 (DOT Performance Plan FY 2002 and Performance Report FY 2000).

NOTES: Large trucks — trucks over 10,000 pounds gross vehicle weight rating, including single unit trucks and truck tractors.

Light trucks — trucks of 10,000 pounds gross vehicle weight rating or less, including pickups, vans, truck-based station wagons, and utility vehicles. The number of light trucks has increased greatly since 1990, affecting light truck occupant fatality numbers.

See U.S. Department of Transportation, Bureau of Transportation Statistics, *National Transportation Statistics 2000*, pp. 429-435, for detailed discussion of modal fatality data.

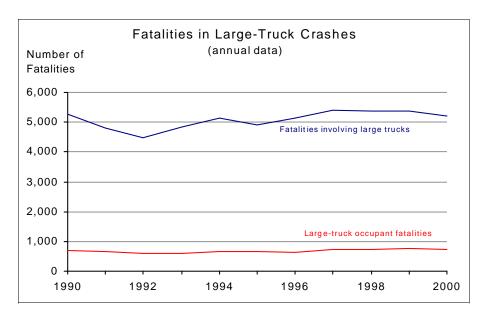
Fatalities by Type	1999	2000
Highway total*	41,717	41,821
Percent change from previous year	0.52	0.25
Passenger car occupants	20,862	20,492
Percent change from previous year	-1.57	-1.77
Light-truck occupants	11,243	11,418
Percent change from previous year	5.03	1.56
Pedestrians	4,939	4,739
Percent change from previous year	-5.53	-4.05
Motorcyclists	2,483	2,862
Percent change from previous year	8.24	15.26
Large-truck occupants	759	741
Percent change from previous year	2.29	-2.37
Bicyclists	754	690
Percent change from previous year	-0.79	-8. <i>4</i> 9
Other highway	596	857
Percent change from previous year	10.37	43.79

^{*}Total highway fatalities include bus occupants, not shown here.

 $SOURCES:\ U.S.\ Department\ of\ Transportation,\ National\ Highway\ Traffic\ Safety\ Administration,\ 2000\ Traffic\ Safety\ Facts,\ available\ at\ http://www-nrd.nhtsa.dot.gov/pdf/nrd-30/ncsa/tsf2000/2000ovrfacts.pdf$



FATALITIES IN LARGE-TRUCK CRASHES



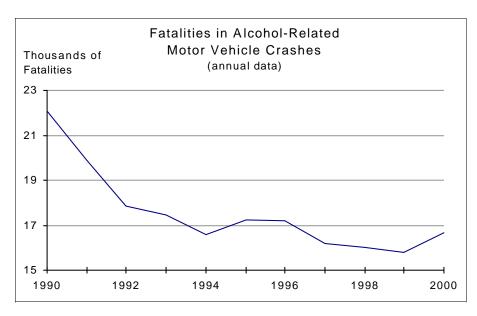
Trucks represent 4 percent of registered highway vehicles, about 7 percent of vehicle miles of travel, and 8 percent of vehicles in fatal crashes. Occupants of other vehicles or people outside the truck account for 85% of total fatalities involving large trucks for 2000.

Large-Truck Crashes	1999	2000
Fatalities involving large trucks Percent change from previous year	5,362 -0.22	5,211 <i>-2.8</i> 2
Large-truck occupant fatalities Percent change from previous year	759 2.29	741 -2.37

NOTE: Large trucks are over 10,000 pounds gross vehicle weight rating.

SOURCES: U.S. Department of Transportation, Federal Motor Carrier Safety Administration, Analysis Division, *Large Truck Crash Profile: The 1999 National Picture*, available at http://www.fmcsa.dot.gov/factsfigs/mchsstats.htm, and U.S. Department of Transportation, National Highway Traffic Safety Administration, National Center for Statistics and Analysis, *2000 Traffic Safety Facts*. Available at: http://www.nhtsa.dot.gov/people/ncsa/factshet.html

ALCOHOL-RELATED HIGHWAY FATALITIES



Percent of Total Highw ay Fatalities	Fatalities in Alcohol-Related Motor Vehicle Crashes (annual data)
50	
45	
40	
35	
30 1990 1992	1994 1996 1998 2000

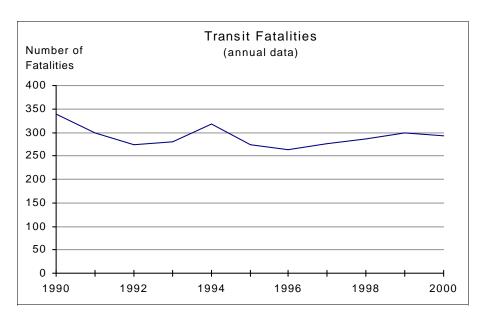
Alcohol-Related Highway Fatalities	1999	2000
Total	15,786	16,653
Percent change from previous year	-1.46	5.49

SOURCE: U.S. Department of Transportation, National Highway Traffic Safety Administration, National Center for Statistics and Analysis, *Traffic Safety Facts 1998*, DOT HS 808 983 (Washington, DC: October 1999), table 13, and personal communication, Sept. 11, 2000. 2000 data: National Highway Traffic Safety Administration, National Center for Statistics and Analysis, *2000 Traffic Safety Facts*. Available at: http://www.nhtsa.dot.gov/people/ncsa/factshet.html

Alcohol is the single largest cause of fatal crashes. Alcohol-related fatalities accounted for nearly 40 percent of all highway fatalities in 2000.

Fatalities include those arising from motor vehicle related crashes in which the driver and/or a fatally injured pedestrian or other nonmotorist had a measured or estimated blood alcohol content of 0.01 grams per deciliter or greater.

TRANSIT FATALITIES



Transit includes transit bus, light and heavy transit rail, commuter rail, paratransit, and other transit categories. Transit fatalities are transit-caused deaths confirmed within 30 days of a transit incident. The fatality numbers cited here do not include suicides.

SOURCE: U.S. Department of Transportation, Federal Transit Administration, State Safety Oversight Program, Annual Report for 1999, available at http://transit-safety.volpe.dot.gov

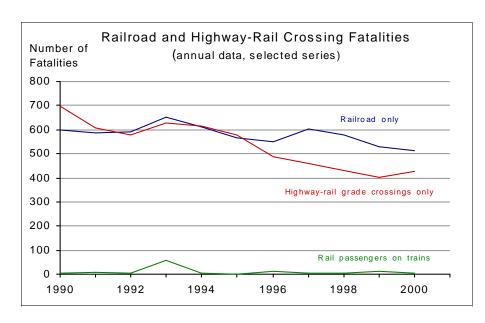
Transit Fatalities	1999	2000*
Transit total	299	292
Percent change from previous year	4.55	-2.34

^{*}Preliminary number.

Transit fatalities include those resulting from all reportable incidents, not just from accidents involving transit vehicles.

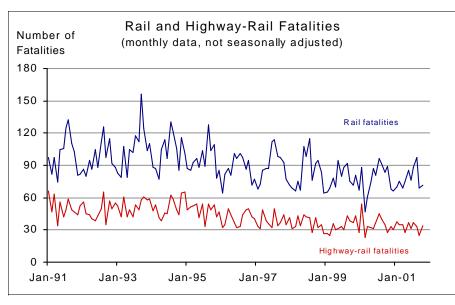
SOURCES: U.S. Department of Transportation, Federal Transit Administration, Safety Management Information Statistics 1999, available at http://transit-safety.volpe.dot.gov/Data/DataSam.asp. 2000 number compiled from various government agencies as cited in the USDOT, BTS, *Transportation Statistics Annual Report 2001* (in draft).

RAILROAD AND HIGHWAY-RAIL CROSSING FATALITIES



Rail-Related Fatalities	1999	2000
Railroad only total	530	512
Percent change from previous year	-8.15	-3.40
Grade crossing total	402	425
Percent change from previous year	-6.73	5.72
Passengers on trains	14	4
Percent change from previous year	250.00	-71.43

NOTE: "Rail passengers on trains" includes fatalities in both highway-rail grade crossings and nongrade crossing accidents. "Railroad only total" includes passengers on trains killed in nongrade crossing accidents. It also includes railroad workers (including contractors), other nontrespassers, and trespassers killed in train accidents, whether on or off the train, except at grade crossings. Data include both freight and passenger railroad operations.



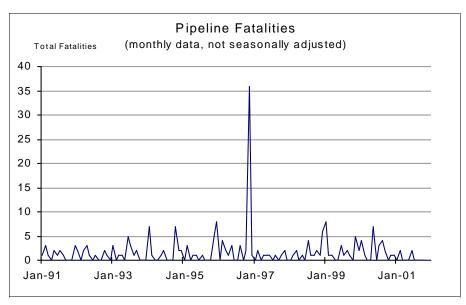
Railroad	Oct-00	Oct-01
Rail Fatalities Percent change from same month previous year	89 23.61	72 -19.10
Highway-Rail Fatalities Percent change from same month previous year	28 -24.32	34 21.43

SOURCE: U.S. Department of Transportation, Federal Railroad Administration, Office of Safety, available at: http://safetydata.fra.dot.gov/officeofsafety

In most years, the overwhelming majority of people killed in train accidents are outside the train. Many are occupants of highway vehicles, pedestrians, or bystanders at highway-rail grade crossings. Railroad workers and others on railroad property (including trespassers) account for most other rail-related fatalities.



HAZARDOUS LIQUID AND NATURAL GAS PIPELINE FATALITIES



Note: Spike in graph represents leak and explosion of gas in a residential and shopping district in San Juan, Puerto Rico, 11/21/96.

Pipeline failures are low-probability events that can result in fatalities, injuries, and property damage. Over time, gas pipeline fatalities tend to outnumber those involving hazardous liquid (e.g., petroleum) pipelines. Outside force damage (e.g., damage to a pipeline during excavation for construction) is the leading cause of pipeline failures, followed by corrosion (DOT Performance Plan FY 2001).

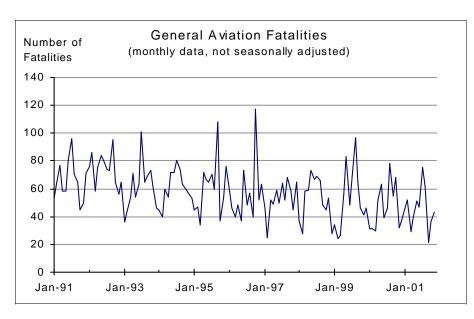
Pipeline Fatalities	Oct-00	Oct-01
Total	0	0
Percent change from same month previous	0.00	0.00

NOTES: The current value is compared to the value from the same period in the previous year to account for seasonality.

All 2001 data are preliminary, and subject to change as incidents are reported.

SOURCE: U.S. Department of Transportation, Office of Pipeline Safety, Research and Special Programs Administration, Online Library Accident and Incident Data as of Dec. 11, 2001, available at http://ops.dot.gov/IA98.htm

GENERAL AVIATION FATALITIES



General aviation fatalities comprise the majority of aviation fatalities in most years.

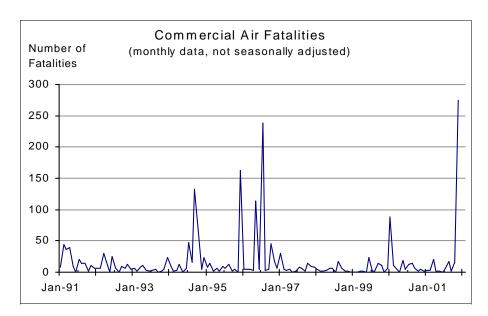
General Aviation	Nov-00	Nov-01
Fatalities	32	43
Percent change from same month previous year	-21.95	34.38

NOTE: The current value is compared to the value from the same period in the previous year to account for seasonality.

General Aviation – Movements of aircraft and helicopters belonging to individuals, companies not primarily in the aviation business, and flying clubs. Services provided by general aviation aircraft include firefighting, law enforcement, news coverage, and corporate in-house transportation.

SOURCE: National Transportation Safety Board, Office of Aviation Safety, available at: http://www.ntsb.gov/aviation/curr_mo.txt

COMMERCIAL AVIATION FATALITIES



Commercial air fatalities include those arising from accidents of planes providing passenger and/or cargo services to the public, including large air carriers, commuter air, and air taxi. Commercial air includes scheduled and nonscheduled service by air carriers operating under 14 Code of Federal Regulations (CFR) 121 and 14 CFR 135.

Commercial Air	Nov-00	Nov-01
Fatalities	5	275
Percent change from same month previous year	0.00	5,400.00

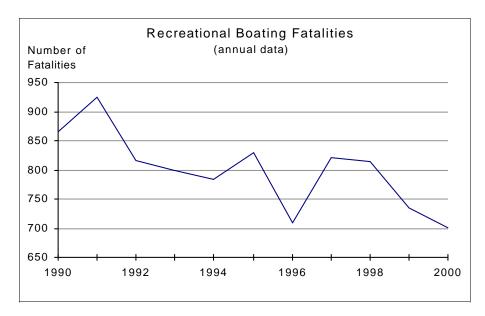
NOTE: The current value is compared to the value from the same period in the previous year to account for seasonality.

Fatalities from the four hijacked airplanes deliberately crashed in terrorist acts on September 11, 2001 are not included by the source in the September 2001 data. The number of people who perished on the four planes was 266. The total number of people on the ground who perished or are missing and presumed dead has not been conclusively determined.

The November 2001 fatalities are due to the November 12 crash of an American Airline plane in Belle Harbor, New York, and resulted in 275 fatalities (including 5 people on ground).

SOURCE: National Transportation Safety Board, Office of Aviation Safety, available at: http://www.ntsb.gov/aviation/curr_mo.txt

RECREATIONAL BOATING FATALITIES



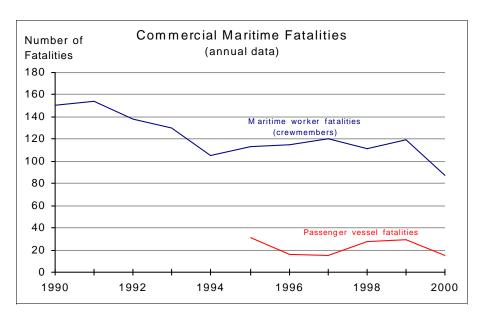
Most fatalities, injuries, and accidents in water transportation involve recreational boating. Most recreational boating is discretionary, and the purpose of trips generally is to spend time on the water. The main cause of recreational boating accidents is human error.

Recreational Boating	1999	2000
Fatalities	734	701
Percent change from previous year	-4.50	-9.94

NOTE: Recreational boats include motorboats, personal watercraft (e.g., jet skis), sailboats, house-boats, rowboats, canoes, kayaks, and some other kinds of watercraft.

SOURCE: U.S. Department of Transportation, U.S. Coast Guard, Office of Boating Safety, *Boating Statistics* (Washington, DC: Annual issues).

FATALITIES IN COMMERCIAL MARITIME TRANSPORTATION



Maritime worker fatalities include crewmembers in the maritime industry aboard U.S. vessels/platforms. The data do not include fatalities on recreational boats or foreign vessels, or fatalities arising from intentional and natural causes. The largest percentage of maritime worker fatalities occur in commercial fishing.

Passenger vessel fatalities include death or disappearance of passengers aboard cruise ships, gambling ships, charter fishing boats, sightseeing boats, and passenger ferries. Deaths of maritime workers on passenger vessels are counted under maritime worker fatalities. Over 90 million people are carried aboard passenger vessels each year.

NOTE: Passenger vessel fatality measure has undergone substantial revision. Including data before 1995 would result in misleading comparisons.

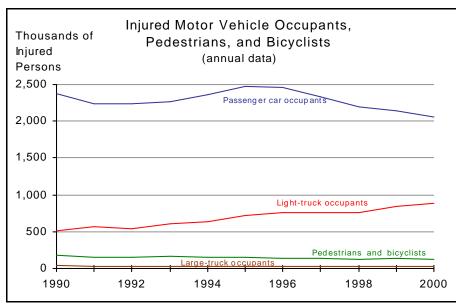
Maritime Fatalities	1999	2000*
Maritime worker fatalities Percent change from previous year	119 <i>7.21</i>	87 -26.89
Passenger vessel fatalities Percent change from previous year	29 3.57	15 -48.28

^{*}Preliminary estimate

NOTE: Crew member fatalities involve a death or disappearance of a crew member or employee aboard a U.S. vessel.

SOURCE: U.S. Department of Transportation, U.S. Coast Guard, Office of Plans, Policy and Evaluation, Personal Communication.

INJURED MOTOR VEHICLE OCCUPANTS, PEDESTRIANS, AND BICYCLISTS



The vast majority of transportation injuries involve motor vehicles. The number of light trucks has increased greatly since 1990, affecting light truck occupant injury numbers.

Injured Persons by Mode	1999	2000
Highway total	3,236,000	3,190,000
Percent change from previous year	1.38	-0.53
Passenger car occupants	2,138,000	2,052,000
Percent change from previous year	-2.86	-3.27
Light-truck occupants	847,000	887,000
Percent change from previous year	11.01	5.43
Pedestrians and bicyclists	136,000	129,000
Percent change from previous year	11.48	-5.15
Motorcyclists	50,000	58,000
Percent change from previous year	2.04	16.00
Large-truck occupants	33,000	31,000
Percent change from previous year	13.79	-9.09
Bus occupants	22,000	18,000
Percent change from previous year	37.50	-18.18

NOTES: National estimates of highway injuries are sampled and subject to sampling errors. Highway table includes categories not displayed in graph.

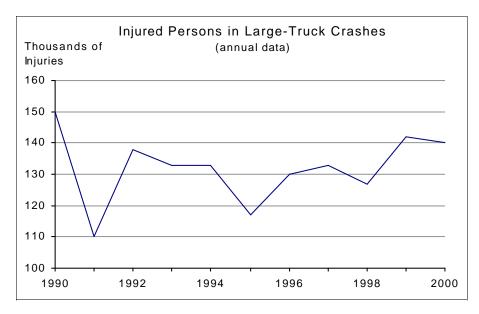
Light trucks — trucks of 10,000 pounds gross vehicle weight rating or less, including pickups, vans, truck-based station wagons, and utility vehicles.

See U.S. Department of Transportation, Bureau of Transportation Statistics, pp. 429-435, *National Transportation Statistics 2000* for detailed discussion of modal injury data.

SOURCE: Data compiled from various government agencies, as cited in U.S. Department of Transportation, Bureau of Transportation Statistics, *National Transportation Statistics 2000*, table 2-2, available at: http://www.bts.gov/btsprod/nts/Ch2_web/2-2.htm, and U.S. Department of Transportation, National Highway Traffic Safety Administration, *2000 Traffic Safety Facts*, available at http://www-nrd.nhtsa.dot.gov/pdf/nrd-30/ncsa/tsf2000/2000ovrfacts.pdf



INJURED PERSONS IN LARGE-TRUCK CRASHES



For 2000, preliminary estimates indicate that 79 percent of the total injuries involving large-truck crashes were occupants of other vehicles or outside the large truck.

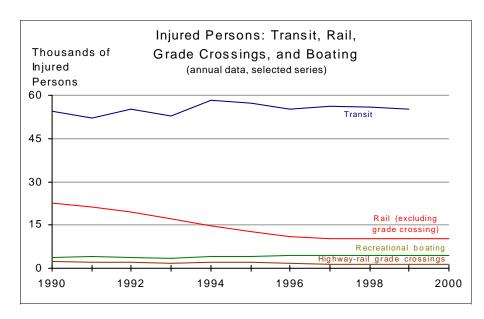
Large-Truck Crashes	1999	2000
Injured persons involving large trucks	142,000	140,000
Percent change from previous year	11.81	-1.41

NOTE: Large trucks are trucks over 10,000 pounds gross vehicle weight rating.

SOURCES: U.S. Department of Transportation, Federal Motor Carrier Safety Administration, Analysis Division, Large Truck Crash Profile: The 1999 National Picture, available at http://www.fmcsa.dot.gov/factsfigs/mchsstats.htm, and U.S. Department of Transportation, National Highway Traffic Safety Administration, 2000 Traffic Safety Facts, available at http://www-nrd.nhtsa.dot.gov/pdf/nrd-30/ncsa/tsf2000/2000ovrfacts.pdf



INJURED PERSONS: TRANSIT, RAIL, GRADE CROSSINGS, AND BOATING



Since 1990, rail injuries have declined by 55 percent.

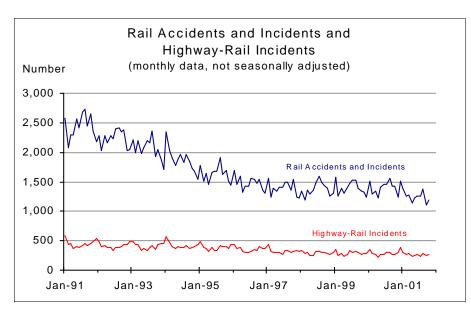
Injured Persons by Mode	1999	2000
Transit* Percent change from previous year	55,990 <i>-0.25</i>	55,325 -1.19
Railroad Percent change from previous year	10,304 <i>1.4</i> 6	10,424 1.16
Recreational Boating Percent change from previous year	4,315 <i>6.44</i>	4,355 <i>0.9</i> 3
Highway-rail Grade Crossing Percent change from previous year	1,396 <i>7.14</i>	1,219 <i>-1.6</i> 8

^{*} Data are for 1999 and 1998.

See U.S. Department of Transportation, Bureau of Transportation Statistics, pp. 429-435, *National Transportation Statistics 2000* for detailed discussion of modal injury data.

SOURCE: Data compiled from various government agencies, as cited in U.S. Department of Transportation, Bureau of Transportation Statistics, *National Transportation Statistics 2000*, table 2-2, available at: http://www.bts.gov/btsprod/nts/Ch2_web/2-2.htm and U.S. Department of Transportation, Federal Railroad Administration, Office of Safety, available at http://safetydata.fra.dot.gov/officeofsafety. 2000 numbers for boating available at U.S. Department of Transportation, U.S. Coast Guard, Office of Boating Safety, *Boating Statistics* (Washington, DC: Annual issues).

RAIL ACCIDENTS AND INCIDENTS



Rail accidents and incidents include any collision between railroad on-track equipment and other vehicles or pedestrians at grade crossings; any event involving operation of railroad on-track equipment that results in damages to railroad property; and any event arising from railroad operations that results in death or injury, or, in the case of railroad employees, an occupational illness.

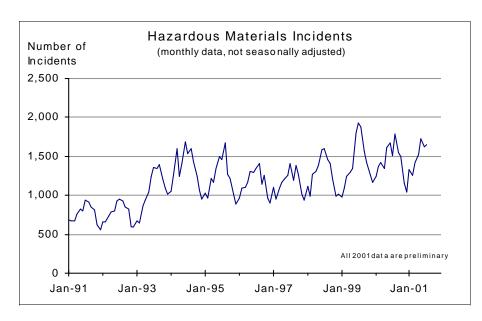
Railroad	Oct-00	Oct-01
Rail accidents and incidents Percent change from same month previous year	1,421 <i>5.7</i> 3	1,192 -16.12
Highway-Rail Incidents Percent change from same month previous year	265 -2.57	268 1.13

NOTE: The current value is compared to the value from the same period in the previous year to account for seasonality.

Accidents and incidents differ by the extent, in dollars, of the property damage resulting from the event.

SOURCE: U.S. Department of Transportation, Federal Railroad Administration, Office of Safety, available at: http://safetydata.fra.dot.gov/officeofsafety

HAZARDOUS MATERIALS INCIDENTS



Number of Incidents	Hazardous Materials Serious Incidents (monthly data, not seasonally adjusted)
50 40 30 20	4MM/4M/M/M/M/M/M/M/M/M/M/M/M/M/M/M/M/M/
10 0 Jan-91	Jan-93 Jan-95 Jan-97 Jan-99 Jan-01

Hazmat Incidents	Jul-00	Jul-01*
Total	1,513	1,644
Percent change from same month previous year	-21.81	8.66

Hazmat Serious Incidents	Jul-00	Jul-01*
Total Percent change from same month previous year	40 -6.98	22 -45.00

*Preliminary estimates

NOTES: The current value is compared to the value from the same period in the previous year to account for seasonality.

Incident reporting requirements were extended to intrastate motor carriers on October 1, 1998. Beginning in April 1993, there was sharp improvement in reporting of incidents by small package carriers.

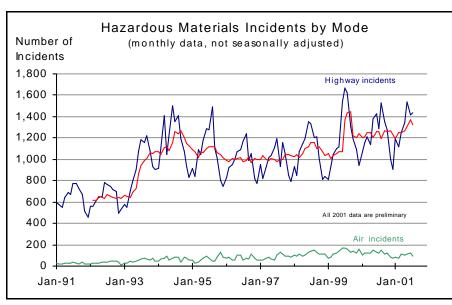
A reported incident is a report of any unintentional release of hazardous material while in transportation (including loading, unloading, and temporary storage). It excludes pipeline and bulk shipments by water, which are reported separately.

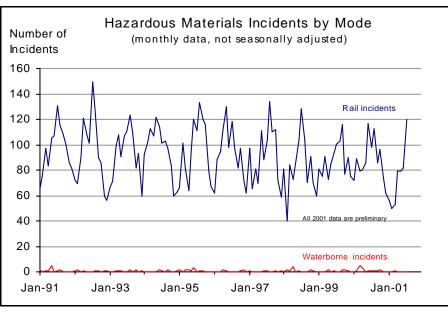
Research and Special Programs Administration (RSPA) defines serious incidents as incidents that involve a fatality or major injury due to a hazardous material, closure of a major transportation artery or facility or evacuation of six or more persons due to the presence of a hazardous material, or a vehicle accident or derailment resulting in the release of a hazardous material.

SOURCE: U. S. Department of Transportation, Research and Special Programs Administration (RSPA), Office of Hazardous Materials, Planning and Analysis, Hazardous Materials Information System data obtained through personal communication.

Flammable liquids (e.g., gasoline) comprise the most tonnage and ton-miles of hazardous material shipments. Gasoline usage peaks in the summer and accounts for the seasonality in hazardous materials incidents.

MODAL BREAKDOWN OF HAZARDOUS MATERIALS INCIDENTS





Hazardous Materials Incidents by Mode	Jul-00	Jul-01*
Highway Percent change from same month previous year	1,291 -22.69	1,435 11.15
Air Percent change from same month previous year	123 -27.65	89 <i>-27.64</i>
Rail Percent change from same month previous year	98 -2.00	120 22. <i>4</i> 5
Waterborne (not including bulk shipments) Percent change from same month previous year	1 100.00	0 -100.00

^{*}Preliminary estimates

NOTE: The current value is compared to the value from the same period in the previous year to account for seasonality.

Incident reporting requirements were extended to intrastate motor carriers on October 1, 1998, which may partly explain the subsequent increased volume of reports. Beginning in April 1993, there was sharp improvement in reporting of incidents by small package carriers.

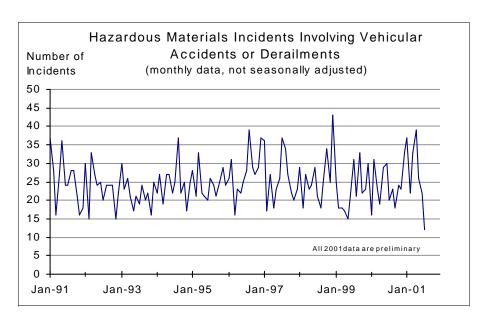
A reported incident is a report of any unintentional release of hazardous material while in transportation (including loading, unloading, and temporary storage). It excludes pipeline and bulk shipments by water, which are reported separately.

A trendline has been provided for highway incidents. The trend has been calculated through a statistical procedure called Structural Modeling, in which the time series under study is decomposed into seasonal, trend and irregular components. For further information on this statistical procedure, see: S.J. Koopman, et al., *Structural Time Series Analyser, Modeller and Predictor* (STAMP), London: Timberlake Consultants Ltd., 2000

SOURCE: U. S. Department of Transportation, Research and Special Program Administration, Office of Hazardous Materials, Planning and Analysis, Hazardous Materials Information System data obtained through personal communication.

Most reported releases of hazardous materials occur on the highways. Statistical analysis reveals an unexpected increase, starting around May 2001, in the underlying trend in the number of highway hazardous materials incidents. This increase can not be explained by variability in the seasonal behavior. It may be due to DOT outreach efforts to improve reporting. BTS will be monitoring the incident data over the next few months to determine if the increase is temporary or not.

HAZARDOUS MATERIALS INCIDENTS INVOLVING CRASHES OR TRAIN DERAILMENTS



Motor vehicle accidents or train derailments account for only a small portion of total number of hazardous materials incidents. However, their consequences are often the most severe.

Hazmat Incidents	Jul-00	Jul-01*
Total incidents involving vehicular accidents	20	12
Percent change from same month previous year	-35.48	-40.00

^{*}Preliminary estimate

NOTES: The current value is compared to the value from the same period in the previous year to account for seasonality.

Reporting requirements were extended to intrastate motor carriers on October 1, 1998, which may have affected data reported after this date.

Accident/derailment is a crash involving a motor vehicle or a derailment of a train.

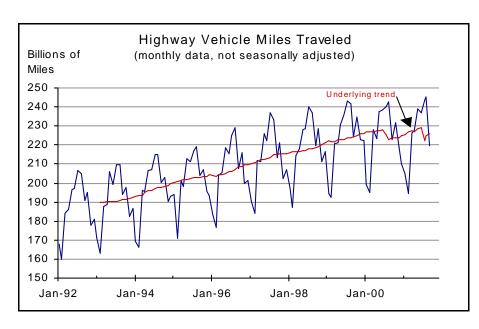
SOURCE: U. S. Department of Transportation, Research and Special Programs Administration, Office of Hazardous Materials, Planning and Analysis, Hazardous Materials Information System data obtained through personal communication.

Mobility

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U.S. HIGHWAY VEHICLE MILES TRAVELED



Vehicle miles of travel (VMT) are key data for highway planning and management, and a common measure of roadway use. Along with other data, VMT are often used in estimating congestion, air quality, and potential gas tax revenues, and can provide a general measure of the level of the nation's economic activity.

Statistical analysis reveals an unexpected drop in the VMT data that began around June 2001 and continues through September 2001. This drop, which is now reflected as a step downward in the underlying trend, cannot be explained by variability in the seasonal behavior of the data. BTS is doing further analysis to better understand what factors may be affecting this change.

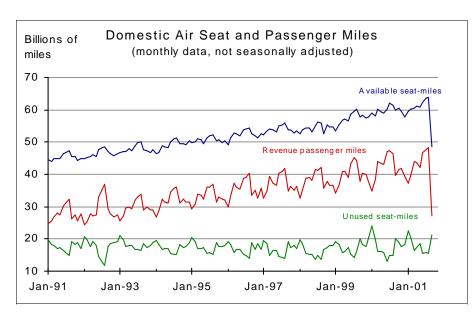
Vehicle Miles Traveled	Sep-00	Sep-01
Millions of highway miles	222,635	219,653
Percent change from same month previous year	-0.74	-1.34

NOTE: The current value is compared to the value from the same period in the previous year to account for seasonality.

A trendline has been provided for vehicle miles traveled. The trend has been calculated through a statistical procedure called Structural Modeling, in which the time series under study is decomposed into seasonal, trend and irregular components. For further information on this statistical procedure, see: S.J. Koopman, et al., *Structural Time Series Analyser, Modeller and Predictor* (STAMP), London: Timberlake Consultants Ltd., 2000

SOURCE: U.S. Department of Transportation, Federal Highway Administration, Office of Highway Policy Information, available at http://www.fhwa.dot.gov/ohim/tvtw/tvtpage.htm.

AVAILABILITY AND USE OF DOMESTIC FLIGHTS: AIR PASSENGERS



Revenue passenger-miles are a measure of the volume of air passenger transportation. Unused seat-miles (the difference between available seat-miles and revenue passenger miles) are used as a measure of airline capacity utilization. Another measure is the intensity of use of the equipment.

NOTE: A revenue passenger-mile is equal to one paying passenger carried one mile. Available seat-miles for an individual flight are the number of seats multiplied by the distance traveled. The data do not include international flights by U.S. domestic carriers or domestic flights by foreign carriers.

Domestic Passenger Aviation	Sep-00	Sep-01
Available seat-miles (billions)	59.76	48.50
Percent change from same month previous year	3.43	-18.85
Revenue passenger miles (billions)	39.57	27.03
Percent change from same month previous year	4.67	-31.69
Unused seat-miles (billions)	20.19	21.47
Percent change from same month previous year	1.09	6.32

NOTES: The current value is compared to the value from the same period in the previous year to account for seasonality. The data have been adjusted to have a standard 30-day month by multiplying the data for each month by the ratio: 30/(actual days in month).

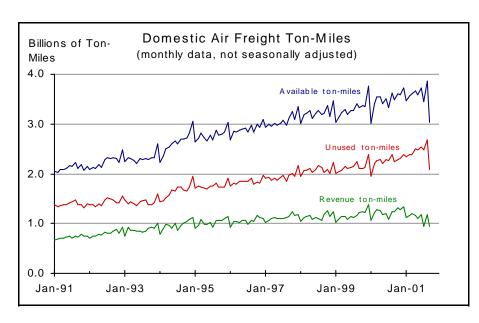
These indicators are components of the passenger and overall aircraft load factors displayed in "Aircraft Utilization—Passengers and Freight.

The dramatic changes in the September 2001 data reflect the impact of the terrorist attacks on September 11, 2001, on aviation, including several days in which commercial air operations were suspended.

SOURCE: U.S. Department of Transportation, Bureau of Transportation Statistics, *Air Carrier Traffic Statistics Monthly*, September 2001.



AVAILABILITY AND USE OF DOMESTIC FLIGHTS: AIR FREIGHT



Though still much smaller than air passenger transportation, air freight is an increasingly important revenue source for the air transportation industry. It includes both freight handled by dedicated air cargo handlers and air cargo shipped on combined passenger and air freight carriers (passenger luggage is not considered cargo for this purpose).

Unused ton-miles are the difference between available ton-miles and revenue ton-miles utilized. Changes in the level of spare capacity might be an indicator of the timely availability of air freight services. For example, a shipper with a sudden need for service will be more likely to obtain an appropriate flight when spare capacity is higher. Space limitations also affect the availability of air freight services.

Domestic Freight Aviation	Sep-00	Sep-01
Available ton-miles (billions) Percent change from same month previous year	3.48 <i>4.6</i> 2	3.04 -12.80
Unused ton-miles (billions) Percent change from same month previous year	2.24 6.51	2.09 -6.47
Revenue ton-miles (billions) Percent change from same month previous year	1.24 1.37	0.94 -24.23

NOTES: The current value is compared to the value from the same period in the previous year to account for seasonality.

A revenue ton-mile is equal to one ton carried one mile and measures utilization of air-freight services. The data do not include international flights by U.S. domestic carriers or domestic flights by foreign carriers.

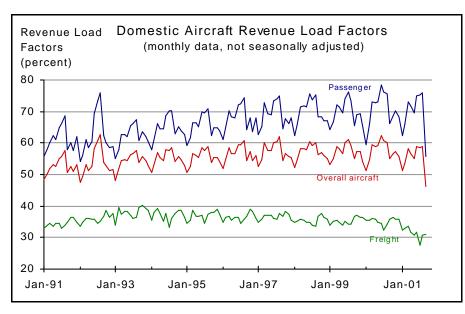
For those planes that carry both freight and passengers, available freight ton-miles are calculated by subtracting available seat-miles times 0.1 from total available ton-miles. The data have been adjusted to have a standard 30-day month by multiplying the data for each month by the ratio: 30/(actual days in month). These indicators are components of freight and overall aircraft load factors displayed in "Aircraft Capacity Utilization—Passengers and Freight."

The dramatic changes in the September 2001 data reflect the impact of the terrorist attacks on September 11, 2001, on aviation, including several days in which commercial air operations were suspended.

SOURCE: U.S. Department of Transportation, Bureau of Transportation Statistics, *Air Carrier Traffic Statistics Monthly*, September 2001.



U.S. CARRIERS AIRCRAFT CAPACITY UTILIZATION - DOMESTIC PASSENGERS AND FREIGHT



Aircraft load factors are used to measure aircraft in-flight capacity utilization.

Domestic Revenue Load Factors (percent)	Sep-00	Sep-01
Passenger revenue load factor	66.22	55.74
Change from same month previous year	0.78	-10. 4 8
Overall aircraft revenue load factor	54.97	46.21
Change from same month previous year	0	-8.76
Freight revenue load factor	35.65	30.98
Change from same month previous year	-1.14	-4.67

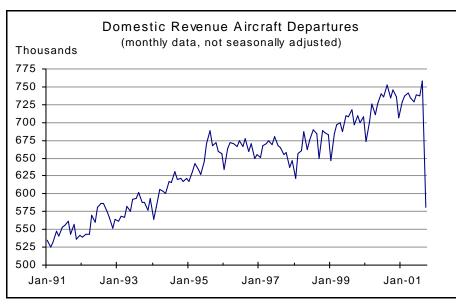
NOTES: The current value is compared to the value from the same period in the previous year to account for seasonality.

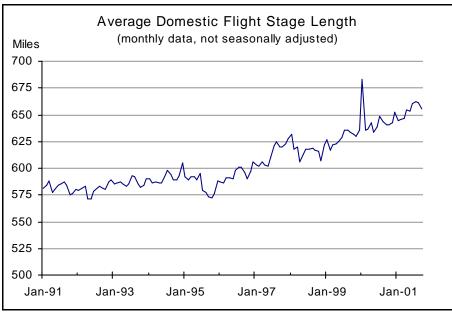
Load factor relates to the potential capacity of a system relative to its actual performance. In order to combine passenger and freight to calculate overall aircraft load factors, a common metric is needed: ton-miles. Thus, it is assumed that a passenger plus baggage weighs 200 pounds. The data do not include international flights by U.S. domestic carriers or domestic flights by foreign carriers.

The dramatic changes in the September 2001 data reflect the impact of the terrorist attacks on September 11, 2001, on aviation, including several days in which commercial air operations were suspended.

SOURCE: U.S. Department of Transportation, Bureau of Transportation Statistics, *Air Carrier Traffic Statistics Monthly*, September 2001.

FLIGHT AVAILABILITY AND DISTANCE: DOMESTIC





Domestic Flight Availability	Sep-00	Sep-01
Revenue aircraft departures (thousands) Percent change from same month previous year	735 5.47	580 -20.98
Flight stage length (miles) Percent change from same month previous year	640 0.98	656 2.39

NOTES: The current value is compared to the value from the same period in the previous year to account for seasonality.

The data have been adjusted to have a standard 30-day month by multiplying the data for each month by the ratio: 30/(actual days in month).

The data do not include international flights by U.S. domestic carriers or domestic flights by foreign carriers.

The dramatic changes in the September 2001 data reflect the impact of the terrorist attacks on September 11, 2001, on aviation, including several days in which commercial air operations were suspended.

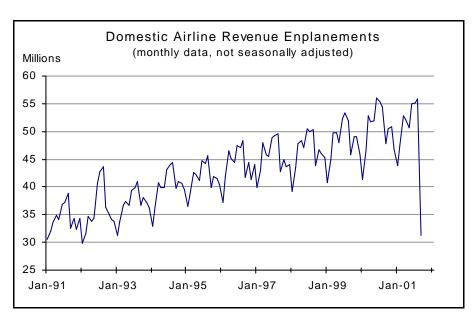
SOURCE: U.S. Department of Transportation, Bureau of Transportation Statistics, *Air Carrier Traffic Statistics Monthly*, September 2001

Frequency of aircraft departures, the number of connections required for a single trip, and the match between available flights and travelers' desired origin and destination points are all important determinants of scheduling convenience. Because data on connections are currently not available in a suitable format, flight stage length is used here to supplement the information on departures.

Flight stage length is the distance between take-off airport and landing airport. If the mix of origin and destination points are held constant, then an increase in flight stage length implies fewer connections are required for a trip and, therefore, higher quality of air passenger services.

The key relation is that departures and flight stage length will tend to move in opposite directions when changes are due to changes in the number of connections. For example, a trip from city A to city B with a connection in city C will have two departures, but generally a shorter average flight stage length, than the direct flight from A to B with a single departure.

ENPLANEMENTS ON DOMESTIC FLIGHTS



Revenue enplanements, the number of passengers boarding aircraft, indicate the demand for gate and luggage services. Enplanements differ from the number of trips because passengers may board more than one flight between their origination point and ultimate destination.

Domestic Passenger Aviation	Sep-00	Sep-01
Revenue aircraft enplanements (millions)	47.74	31.33
Percent change from same month previous year	4.06	-34.37

NOTES: The current value is compared to the value from the same period in the previous year to account for seasonality.

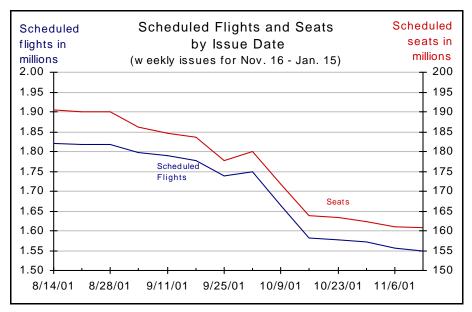
The data have been adjusted to have a standard 30-day month by multiplying the data for each month by the ratio: 30/(actual days in month).

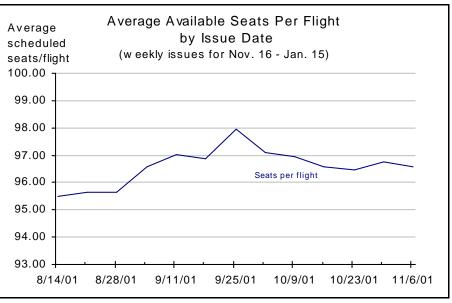
The data do not include international flights by U.S. domestic carriers or domestic flights by foreign carriers.

The dramatic changes in the September 2001 data reflect the impact of the terrorist attacks on September 11, 2001, on aviation, including several days in which commercial air operations were suspended.

SOURCE: U.S. Department of Transportation, Bureau of Transportation Statistics, *Air Carrier Traffic Statistics Monthly*, September 2001

SCHEDULED FLIGHT AVAILABILITY





Scheduled Flights and Seats	16-Oct-01	13-Nov-01
Scheduled Flights (millions) Percent change from four weeks ago	1.64 -10.79	1.61 <i>-1.88</i>
Scheduled Seats (millions) Percent change from four weeks ago	158.14 <i>-11.0</i> 3	154.96 <i>-2.01</i>
Scheduled Average Plane Size (seats/plane) Percent change from four weeks ago	96.59 <i>-0.28</i>	96.46 <i>-0.14</i>

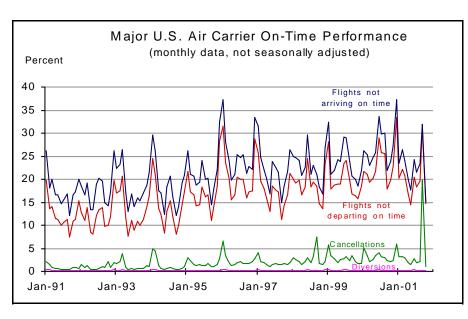
NOTE: The data refers to flights within the U.S. operated by domestic air carriers.

SOURCE: Various issues obtained through subscription, the Official Airline Guide, Reed Elsevier, Inc.

Published flight schedules represent airlines willingness to offer tickets for flights in the future given information available at the publication date. Published flights can result in two types of losses for the airline: dollar losses when an operated flight fails to generate sufficient revenue to cover operating costs and reputation losses when a published flight is subsequently cancelled. Failure to offer a flight for which there is sufficient demand also represents a loss to the airline in the form of a foregone profit opportunity.

Airline schedules for a particular future period will change as the publication date approaches the future period. Surprises that impact expected future profits, such as the September 11, 2001 terrorist attack, will change airlines' willingness to offer flights. Conversely, airlines will be more likely to publish flights at dates closer to scheduled departure because surprises are less likely over a shorter time horizon. In addition to offering new flights or canceling offered flights, airlines can also respond by making changes to the size of the plane flown. Schedule changes will also tend to lag the arrival of new information due to the time it takes to analyze and implement the new information.

MAJOR U.S. AIR CARRIER ON-TIME PERFORMANCE



The number of flights not departing or arriving on time, cancellations, and diversions are measures of service quality.

These indicators are strongly seasonal and are affected by weather and heavy demand in winter and summer months, respectively.

On-Time Performance	Oct-00	Oct-01
Number of scheduled flights Percent change from same month previous year	491,202 2.70	404,898 -17.57
Percent of flights not arriving on time Change from same month previous year	23.77 3.83	15.08 -8.69
Percent of flights not departing on time Change from same month previous year	19.70 3.24	14.61 -5.10
Percent of cancelled flights* Change from same month previous year	2.13 0.09	1.05 -1.08
Percent of diverted flights** Change from same month previous year	0.09 0.19 <i>0.06</i>	0.17 -0.02

^{*} Also counted in flights not arriving or departing on time.

NOTES: The current value is compared to the value from the same period in the previous year to account for seasonality.

The data cover the 10 largest U.S. air carriers. A scheduled operation consists of any nonstop segment of a flight. The term "late" is defined as 15 minutes after the scheduled departure or arrival time. A cancelled flight is one that was not operated but was listed in a carrier's computer reservation system within seven calendar days of the scheduled departure. A diverted flight is one that left from the scheduled departure airport but flew to a destination point other than the scheduled destination point.

Aloha Airlines began reporting in October 2000 and is included here starting in October 2001. For comparability, the year-ago changes and growth rates are based on data that excludes Aloha. American Eagle began reporting in January 2001, will be excluded here until one year's data is available to retain comparability with previous years.

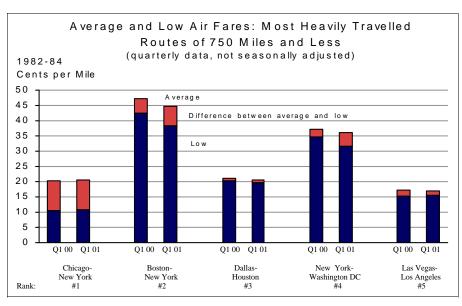
The dramatic changes in the September 2001 data reflect the impact of the terrorist attacks on September 11, 2001, on aviation, including several days in which commercial air operations were suspended.

SOURCE: U.S. Department of Transportation, Bureau of Transportation Statistics, Airline Service Quality Performance data.



^{**} Also counted in flights not arriving on time.

AIR FARES AND PASSENGER VOLUME FOR THE TOP FIVE MAJOR SHORT ROUTES



NOTE: Blue portion of bar = lowest average fare for an airline meeting the criteria in the text. Red portion of bar = the difference between the average fare for all airlines, and the lowest average fare airline.

Blue + red portions of bar = the average fare for the market.

Passenger air fares are a measure of the price of air travel between cities. Major short routes consist of the top five routes of 750 miles and less by number of passengers for the most recent quarter. Large markets consist of the top 1,000 passenger markets at all distances, plus routes that have previously achieved this distinction. Low fares are the lowest average fare for an airline serving at least 10 percent of passengers in the market, or the airline with the lowest average fare, if there is only one airline with at least a 10 percent share.

In the first quarter of 2001, there were **539** large-market routes of 750 miles or less.

Consumer air fares (less than 750 miles)	Q1 00	Q1 01	% Change
Chicago-New York (729 miles)			
Average Fare (1982-84 4/mile)	20.33	20.61	1.40
Low Fare (1982-84 4/mile)	10.61	10.93	2.99
Daily Passengers	6,108	5,920	-3.08
Boston-New York (185 miles)			
Average Fare (1982-84 4/mile)	47.22	44.61	-5.53
Low Fare (1982-84 4/mile)	42.40	38.46	-9.31
Daily Passengers	6,611	5,863	-11.31
Dallas-Houston (236 miles)			
Average Fare (1982-84 4/mile)	21.15	20.50	-3.09
Low Fare (1982-84 4/mile)	20.40	19.78	-3.05
Daily Passengers	5,730	5,503	-3.96
New York-Wash DC (215 miles)			
Average Fare (1982-84 4/mile)	37.21	36.00	-3.25
Low Fare (1982-84 4/mile)	34.71	31.77	-8.49
Daily Passengers	5,786	5,047	-12.77
Las Vegas-L.A. (236 miles)			
Average Fare (1982-84 4/mile)	17.12	16.88	-1.41
Low Fare (1982-84 4/mile)	15.36	15.43	0.48
Daily Passengers	4,983	5,024	0.82

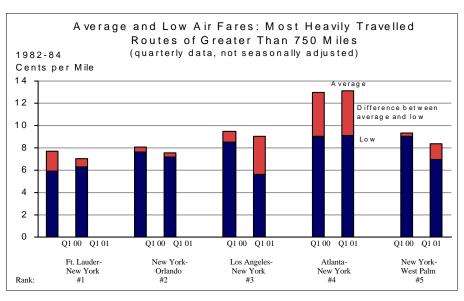
NOTES: The current value is compared to the value from the same period in the previous year to account for seasonality.

Average fares are based on the one-way cost for all paying customers and exclude passengers that fly for free such as those using a frequent flyer program. City-pairs include all airports in each city.

SOURCE: U.S. Department of Transportation: Bureau of Transportation Statistics, and Office of the Assistant Secretary for Aviation and International Affairs, and http://ostpxweb.ost.dot.gov/aviation/.



AIR FARES AND PASSENGER VOLUME FOR THE TOP FIVE MAJOR LONG ROUTES



NOTE: Blue portion of bar = lowest average fare for an airline meeting the criteria in the text. Red portion of bar = the difference between the average fare for all airlines, and the lowest average fare airline.

Blue + red portions of bar = the average fare for the market.

Major long routes consist of the top five routes of more than 750 miles by number of passengers for the most recent quarter. In the first quarter of 2001, there were 759 large-market routes of more than 750 miles.

Consumer air fares (greater than 750 miles)	Q1 00	Q1 01	% Change
Ft Lauder-New York (1072 miles)			
Average Fare (1982-84 4/mile)	7.70	7.01	-8.88
Low Fare (1982-84 4/mile)	5.95	6.32	6.35
Daily Passengers	6,707	9,384	39.91
New York-Orlando (944 miles)			
Average Fare (1982-84 4/mile)	8.08	7.54	-6.72
Low Fare (1982-84 4/mile)	7.60	7.17	-5.56
Daily Passengers	5,920	7,224	22.03
L.ANew York (2469 miles)			
Average Fare (1982-84 4/mile)	9.45	9.01	-4.63
Low Fare (1982-84 4/mile)	8.48	5.65	-33. <i>4</i> 2
Daily Passengers	5,827	6,006	3.07
Atlanta-New York (756 miles)			
Average Fare (1982-84 4/mile)	12.95	13.12	1.30
Low Fare (1982-84 4/mile)	9.03	9.12	0.97
Daily Passengers	5,762	5,675	-1.51
New York-West Palm (1024 miles)			
Average Fare (1982-84 4/mile)	9.34	8.39	-10.12
Low Fare (1982-84 4/mile)	9.06	6.95	-23.31
Daily Passengers	4,582	5,112	11.57

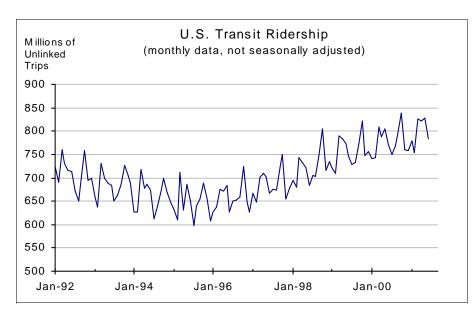
NOTES: The current value is compared to the value from the same period in the previous year to account for seasonality.

Average fares are based on the one-way cost for all paying customers and exclude passengers that fly for free such as those using a frequent flyer program. City-pairs include all airports in each city.

SOURCE: U.S. Department of Transportation: Bureau of Transportation Statistics, and Office of the Assistant Secretary for Aviation and International Affairs, and http://ostpxweb.ost.dot.gov/aviation/.



PUBLIC TRANSIT



Public transportation includes transit bus, transit rail, commuter rail, trolleys, and several demand-responsive services.

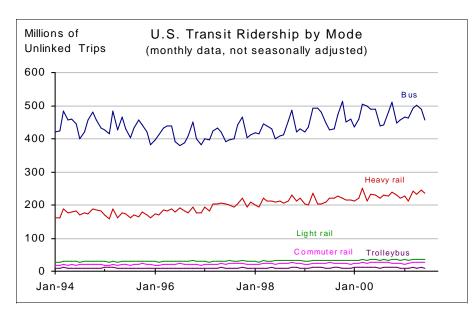
Transit Ridership	Jun-00	Jun-01
Unlinked trips (in thousands)	770,455	784,061
Percent change from same month previous year	2.92	1.77

NOTE: The current value is compared to the value from the same period in the previous year to account for seasonality.

According to the American Public Transportation Association (APTA), an unlinked transit trip is a trip on one transit vehicle. A person riding one vehicle from origin to destination takes one unlinked trip; a person who transfers to a second vehicle takes two unlinked trips; a person who transfers to a third vehicle takes three unlinked trips. APTA estimates that the number of people riding transit on an average weekday is 45 percent of the number of unlinked transit passenger trips.

SOURCE: American Public Transportation Association, *APTA Quarterly Transit Ridership Report*, available at: http://www.apta.com/stats/ridershp/index.htm

PUBLIC TRANSPORTATION BY MODE



Ridership of heavy rail has been climbing faster than any other mode of public transportation. Bus ridership is almost 60 percent of total transit ridership.

Transit Ridership by Mode	Jun-00	Jun-01
Bus (thousands)	489,792	457,272
Percent change from same month previous year	9.18	-6.64
Heavy Rail (thousands)	231,267	236,042
Percent change from same month previous year	10.54	2.06
Commuter Rail (thousands)	35,238	35,113
Percent change from same month previous year	4.54	-0.35
Light Rail (thousands)	26,534	27,252
Percent change from same month previous year	8.87	2.71
Trolleybus (thousands)	11,337	9,726
Percent change from same month previous year	9.13	-14.21

NOTES: The current value is compared to the value from the same period in the previous year to account for seasonality.

According to the American Public Transportation Association (APTA), an unlinked transit trip is a trip on one transit vehicle. A person riding one vehicle from origin to destination takes one unlinked trip; a person who transfers to a second vehicle takes two unlinked trips; a person who transfers to a third vehicle takes three unlinked trips. APTA estimates that the number of people riding transit on an average weekday is 45 percent of the number of unlinked transit passenger trips.

Commuter Rail – Railroad local and regional passenger train operations between a central city, its suburbs, and/or another central city. It may either be locomotive-hauled or self-propelled, and is characterized by multitrip tickets, specific station-to-station fares, railroad employment practices, and usually only one or two stations in the central business district. Also known as "suburban rail."

Light Rail – An electric railway with a "light volume" traffic capacity compared to "heavy rail." Light rail may include multicar trains or single cars. Also known as "Streetcar," "Trolley car," and "Tramway."

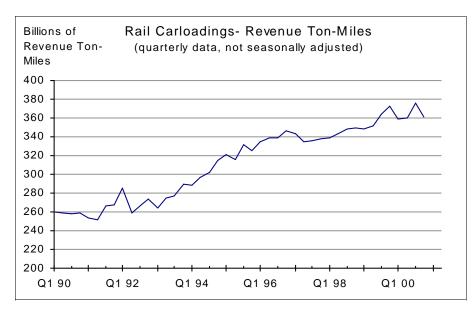
Heavy Rail – An electric railway with the capacity of "heavy volume" of traffic and characterized by exclusive rights-of-way, multicar trains, high speed and rapid acceleration, sophisticated signaling, and high platform loading.

Trolleybus – Rubber-tired passenger vehicles operating singly on city streets. Trolleybuses are propelled by electricity drawn from an overhead electric line via trolleys.

SOURCE: American Public Transportation Association, *APTA Quarterly Transit Ridership Report*, available at: http://www.apta.com/stats



RAIL FREIGHT



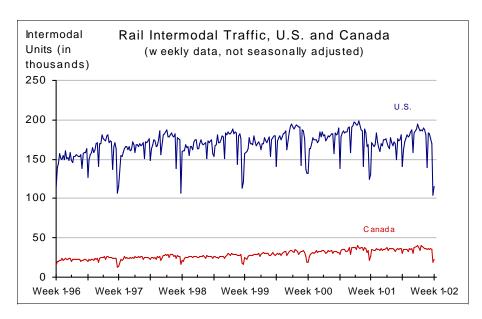
The top commodity in U.S. rail carloadings is coal. (Association of American Railroads, Weekly Railroad Traffic).

Rail Freight Revenue Ton Miles	Q4 99	Q4 00
Total (billions)	373	361
Percent change from same quarter previous year	6.49	-3.06

NOTE: The current value is compared to the value from the same period in the previous year to account for seasonality.

SOURCES: Association of American Railroads, *Railroad Revenues, Expenses, and Income. Class 1 Railroads in the United States*, R&E Series, and Surface Transportation Board, Office of Economics, Environmental Analysis and Administration at: http://www.stb.dot.gov.

WEEKLY RAIL INTERMODAL TRAFFIC



Rail intermodal traffic consists of units of trailers and containers. Changes in rail intermodal traffic have been in the number of container units.

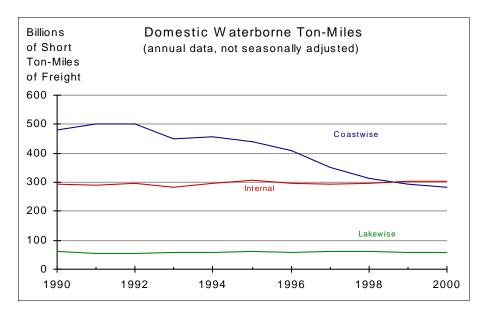
Rail Intermodal Traffic, U.S. and Canada	Week 1-01	Week 1-02
United States Percent change from same week previous year	131,228 -0.58	115,879 <i>-11.70</i>
Canada Percent change from same week previous year	26,119 <i>37.7</i> 8	23,099 -11.56

NOTE: The current value is compared to the value from the same period in the previous year to account for seasonality.

Traffic of Canadian railroads reflect their Canadian and U.S. operations, and the operations of their subsidiaries. U.S. traffic reflects the U.S. and Canadian operations of U.S. railroads.

SOURCE: Association of American Railroads, Policy and Communication Department, Weekly Railroad Traffic, Intermodal Traffic, Washington, DC.

DOMESTIC WATERBORNE FREIGHT



Domestic waterborne ton-miles show the level of freight flows through U.S. inland, coastal, and Great Lakes waterways. Domestic waterborne ton-miles in the coastwise trade have declined in recent years.

Petroleum and petroleum products, crude materials, and coal comprise most of the cargo moving in U.S. domestic waterborne trade.

U.S. Domestic Waterborne Freight (billion short ton-miles)	1999	2000
Internal	304.7	302.6
Percent change from previous year	3.32	-0.69
Coastwise	292.7	283.8
Percent change from previous year	-7.05	-3.04
Lakewise	57.0	58.0
Percent change from previous year	-7.62	1.75

NOTES: Data excludes traffic between ports in Puerto Rico and the Virgin Islands.

Coastwise—Domestic traffic receiving a carriage over the ocean, or the Gulf of Mexico, (e.g. New Orleans to Baltimore, New York to Puerto Rico, San Francisco to Hawaii, Alaska to Hawaii). Traffic between Great Lakes ports and seacoast ports, when having a carriage over the ocean, is also termed Coastwise.

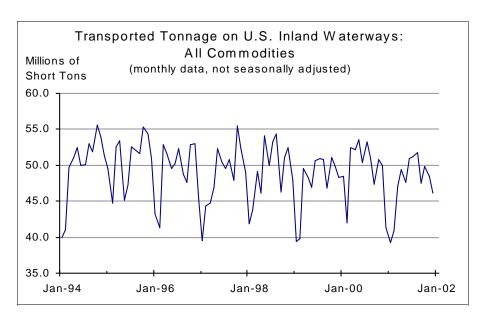
Lakewise—Waterborne traffic between the United States ports on the Great Lakes System. The Great Lakes System is treated as a separate waterway system rather than as a part of the inland waterway system. From 1990 on, marine products, sand and gravel being moved from the Great Lakes to Great Lake destinations are classified as lakewise traffic.

Internal—Vessel movements (origin and destination) which take place solely on inland waterways. An inland waterway is one geographically located within the boundaries of the contiguous 48 states or within the boundaries of the State of Alaska.

The term "internal traffic" is also applied to these vessel movements: those which involve carriage on both inland waterways and the Great Lakes; those occurring between offshore areas and inland waterways (e.g., oil rig supplies and fish); and those taking place within the Delaware Bay, Chesapeake Bay, Puget Sound, and the San Francisco Bay, which are considered internal bodies of water rather than arms of the ocean.

SOURCE: U.S. Army Corps of Engineers, Waterborne Commerce of the U.S. (New Orleans, LA: Annual issues), Part 5, National Summaries, table 1-4, and similar tables in earlier editions, available at http://www.wrsc.usace.army.mil/ndc/wcsc.htm. 2000 numbers: Personal communication.

U.S. INLAND WATERWAYS TRADE



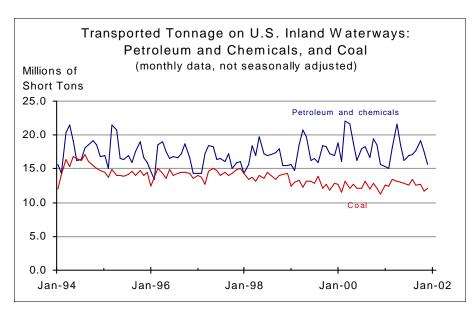
Almost 60 percent of the U.S. domestic waterborne trade tonnage is moved on the inland waterways. This market consists of carriers that transport freight between U.S. ports. At least 80 percent of the tonnage in this trade is carried by barge.

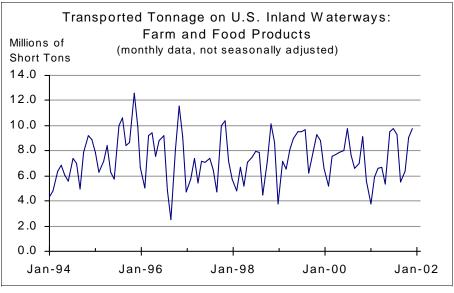
Inland Waterways Commercial Tonnage	Dec-00	Dec-01
All commodities (million short tons)	41.3	46.1
Percent change from same month previous year	-14.49	11.62

NOTE: The current value is compared to the value from the same period in the previous year to account for seasonality.

SOURCE: U.S. Army Corps of Engineers, Waterborne Commerce Statistics Center, Monthly Indicators, available at: http://www.wrsc.usace.army.mil/ndc/monthlyindicators.htm.

BREAKDOWN OF U.S. INLAND WATERWAYS TRADE





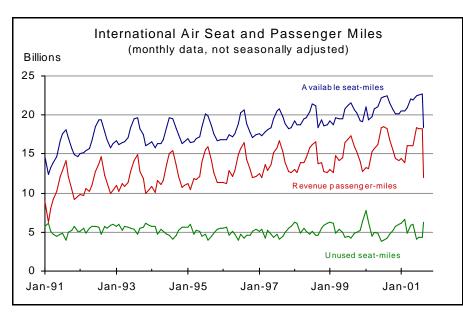
Inland Waterways Commercial Tonnage	Dec-00	Dec-01
Petroleum and chemicals (million short tons) Percent change from same month previous year	15.60 -7.69	15.60 <i>0.00</i>
Coal (million short tons) Percent change from same month previous year	11.20 -13.18	12.20 8.93
Farm and food products (million short tons) Percent change from same month previous year	5.59 -36.33	9.75 <i>74.4</i> 2

NOTE: The current value is compared to the value from the same period in the previous year to account for seasonality.

SOURCE: U.S. Army Corps of Engineers, Waterborne Commerce Statistics Center, Monthly Indicators, available at: http://www.wrsc.usace.army.mil/ndc/monthlyindicators.htm.

Petroleum and chemicals, coal, and farm and food products make up the vast majority of U.S. inland waterways trade tonnage. In December 2001, these commodities constituted nearly 81 percent of total inland waterway trade.

AVAILABILITY AND USE OF INTERNATIONAL FLIGHTS BY U.S. AIR CARRIERS: AIR PASSENGERS



Revenue passenger-miles are a measure of the volume of air passenger transportation. Unused seat-miles (the difference between available seat-miles and revenue passenger miles) are used as a measure of airline capacity utilization. Another measure is the intensity of use of the equipment.

NOTE: A revenue passenger-mile is equal to one paying passenger carried one mile. Available seat-miles for an individual flight are the number of seats multiplied by the distance traveled. The data include both transborder and foreign flights by U.S. carriers, but do not include any flights by foreign carriers.

International Passenger Aviation	Sep-00	Sep-01
Available seat-miles (billions)	21.52	18.32
Percent change from same month previous year	3.87	-14.89
Revenue passenger-miles (billions)	16.87	12.03
Percent change from same month previous year	6.06	-28.69
Unused seat-miles (billions)	4.66	6.29
Percent change from same month previous year	-3.34	35.07

NOTES: The current value is compared to the value from the same period in the previous year to account for seasonality. The data have been adjusted to have a standard 30-day month by multiplying the data for each month by the ratio: 30/(actual days in month).

These indicators are components of the passenger and overall aircraft load factors displayed in "International Aircraft Utilization—Passengers and Freight.

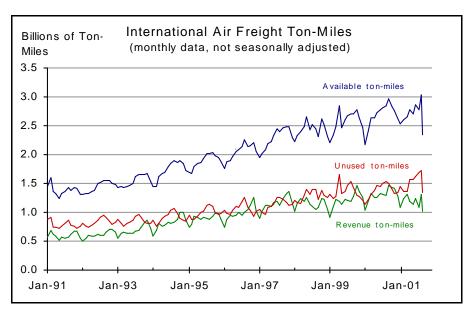
The data include both transborder and foreign flights by U.S. carriers, but do not include any flights by foreign carriers.

The dramatic changes in the September 2001 data reflect the impact of the terrorist attacks on September 11, 2001, on aviation, including several days in which commercial air operations were suspended.

SOURCE: U.S. Department of Transportation, Bureau of Transportation Statistics, *Air Carrier Traffic Statistics Monthly*, September 2001.



AVAILABILITY AND USE OF INTERNATIONAL FLIGHTS BY U.S. AIR CARRIERS: AIR FREIGHT



Though still much smaller than air passenger transportation, air freight is an increasingly important revenue source for the air transportation industry. It includes both freight handled by dedicated air cargo handlers and air cargo shipped on combined passenger and air freight carriers (passenger luggage is not considered cargo for this purpose).

Unused ton-miles are the difference between available ton-miles and revenue ton-miles utilized. Changes in the level of spare capacity might be an indicator of the timely availability of air freight services. For example, a shipper with a sudden need for service will be more likely to obtain an appropriate flight when spare capacity is higher. Space limitations also affect the availability of air freight services.

) Sep-01
2.35
-20.87
1.34 -10.81
1.01 -31.16

NOTES: The current value is compared to the value from the same period in the previous year to account for seasonality.

A revenue ton-mile is equal to one ton carried one mile and measures utilization of air-freight services.

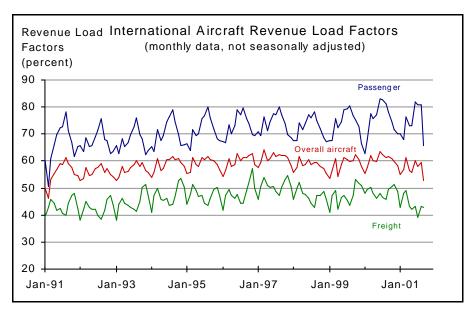
For those planes that carry both freight and passengers, available freight ton-miles are calculated by subtracting available seat-miles times 0.1 from total available ton-miles. The data have been adjusted to have a standard 30-day month by multiplying the data for each month by the ratio: 30/(actual days in month). These indicators are components of freight and overall aircraft load factors displayed in "Aircraft Capacity Utilization—Passengers and Freight."

The data include both transborder and foreign flights by U.S. carriers, but do not include any flights by foreign carriers.

The dramatic changes in the September 2001 data reflect the impact of the terrorist attacks on September 11, 2001, on aviation, including several days in which commercial air operations were suspended.

SOURCE: U.S. Department of Transportation, Bureau of Transportation Statistics, *Air Carrier Traffic Statistics Monthly*, September 2001.

U.S. AIR CARRIERS AIRCRAFT CAPACITY UTILIZATION: INTERNATIONAL PASSENGERS AND FREIGHT



Aircraft load factors are used to measure aircraft in-flight capacity utilization.

International Revenue Load Factors (percent)	Sep-00	Sep-01
Passenger revenue load factor	78.37	65.67
Change from same month previous year	1.61	-12.70
Overall aircraft revenue load factor	61.59	52.93
Change from same month previous year	1.51	-8.66
Freight revenue load factor	49.44	43.01
Change from same month previous year	2.13	-6. <i>4</i> 3

NOTES: The current value is compared to the value from the same period in the previous year to account for seasonality.

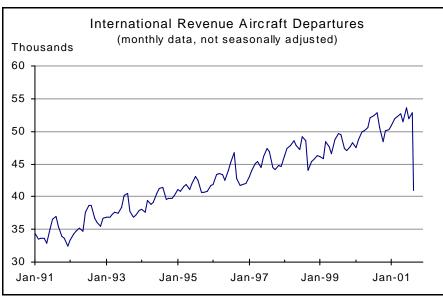
Load factor relates to the potential capacity of a system relative to its actual performance. In order to combine passenger and freight to calculate overall aircraft load factors, a common metric is needed: ton-miles. Thus, it is assumed that a passenger plus baggage weighs 200 pounds.

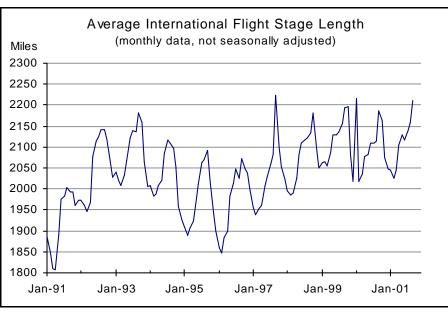
The data include both transborder and foreign flights by U.S. carriers, but do not include any flights by foreign carriers.

The dramatic changes in the September 2001 data reflect the impact of the terrorist attacks on September 11, 2001, on aviation, including several days in which commercial air operations were suspended.

SOURCE: U.S. Department of Transportation, Bureau of Transportation Statistics, *Air Carrier Traffic Statistics Monthly*, September 2001.

FLIGHT AVAILABILITY AND DISTANCE: INTERNATIONAL FLIGHTS OF U.S. CARRIERS





International Flight Availability- U.S. Air Carriers	Sep-00	Sep-01
Revenue aircraft departures (thousands) Percent change from same month previous year	51 7.03	41 -19.01
Flight stage length (miles) Percent change from same month previous year	2,186 <i>-0.3</i> 5	2,212 1.19

NOTES: The current value is compared to the value from the same period in the previous year to account for seasonality.

The data have been adjusted to have a standard 30-day month by multiplying the data for each month by the ratio: 30/(actual days in month).

The data include both transborder and foreign flights by U.S. carriers, but do not include any flights by foreign carriers.

The dramatic changes in the September 2001 data reflect the impact of the terrorist attacks on September 11, 2001, on aviation, including several days in which commercial air operations were suspended.

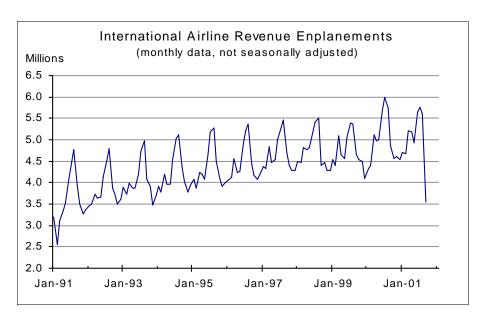
SOURCE: U.S. Department of Transportation, Bureau of Transportation Statistics, *Air Carrier Traffic Statistics Monthly*, September 2001

Frequency of aircraft departures, the number of connections required for a single trip, and the match between available flights and travelers' desired origin and destination points are all important determinants of scheduling convenience. Because data on connections are currently not available in a suitable format, flight stage length is used here to supplement the information on departures.

Flight stage length is the distance between take-off airport and landing airport. If the mix of origin and destination points are held constant, then an increase in flight stage length implies fewer connections are required for a trip and, therefore, higher quality of air passenger services.

The key relation is that departures and flight stage length will tend to move in opposite directions when changes are due to changes in the number of connections. For example, a trip from city A to city B with a connection in city C will have two departures, but generally a shorter average flight stage length, than the direct flight from A to B with a single departure.

ENPLANEMENTS ON INTERNATIONAL FLIGHTS OF U.S. CARRIERS



Revenue enplanements, the number of passengers boarding aircraft, indicate the demand for gate and luggage services. Enplanements differ from the number of trips because passengers may board more than one flight between their origination point and ultimate destination.

International Passenger Aviation	Sep-00	Sep-01
Revenue aircraft enplanements (millions)	4.86	3.54
Percent change from same month previous year	4.43	-27.10

NOTES: The current value is compared to the value from the same period in the previous year to account for seasonality.

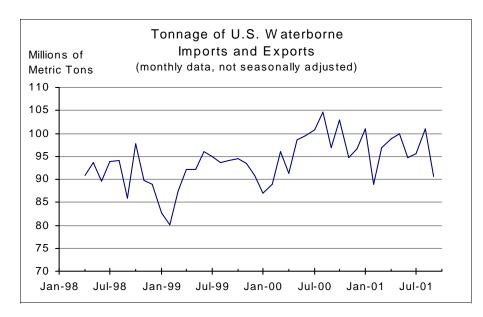
The data have been adjusted to have a standard 30-day month by multiplying the data for each month by the ratio: 30/(actual days in month).

The data include both transborder and foreign flights by U.S. carriers, but do not include any flights by foreign carriers.

The dramatic changes in the September 2001 data reflect the impact of the terrorist attacks on September 11, 2001, on aviation, including several days in which commercial air operations were suspended.

SOURCE: U.S. Department of Transportation, Bureau of Transportation Statistics, *Air Carrier Traffic Statistics Monthly*, September 2001

U.S. FOREIGN WATERBORNE FREIGHT



Import and export tonnage helps identify the volume of cargo flowing through U.S. ports and the resulting vessel traffic on U.S. coastal waters. It also helps identify needs for intermodal truck and rail traffic.

Most U.S. coastal ports handle both foreign and domestic cargoes.

U.S. International Freight	Sep-00	Sep-01
Total waterborne metric tons (thousands)	96,897	90,618
Percent change from same month previous year	3.10	-6. <i>4</i> 8

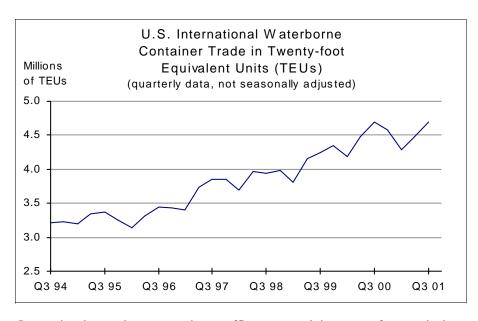
NOTE: The current value is compared to the value from the same period in the previous year to account for seasonality.

A metric ton is equal to 2,204.6 pounds.

SOURCE: U.S. Department of Transportation, Maritime Administration, Office of Statistical and Economic Analysis, U.S. Foreign Waterborne Transportation Statistics data, available at: http://www.marad.dot.gov/statistics/usfwts/index.html.



CONTAINER TRAFFIC VOLUME



International waterborne container traffic, measured in twenty-foot equivalent units (TEUs), helps identify container traffic trends affecting ports and related intermodal freight demand.

The majority of container traffic involves manufactured goods.

Container transportation is very concentrated and competitive. The top 25 U.S. ports handle more than 90 percent of U.S. container traffic.

U.S. International Container Traffic	Q3 00	Q3 01
Total waterborne TEUs (thousands)	4,699	4,698
Percent change from same quarter previous year	10.75	-0.02

NOTE: The current value is compared to the value from the same period in the previous year to account for seasonality.

A twenty-foot-equivalent unit (TEU) is the total length of the container divided by 20. A 48-foot container equals 2.4 TEUs.

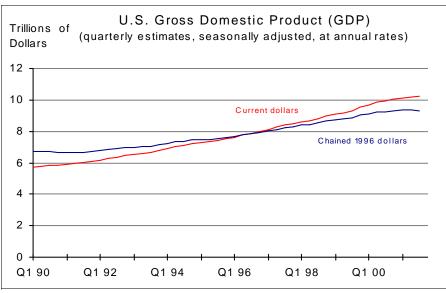
SOURCE: Journal of Commerce, Port Import/Export Reporting Service (PIERS) data.

Economic Growth

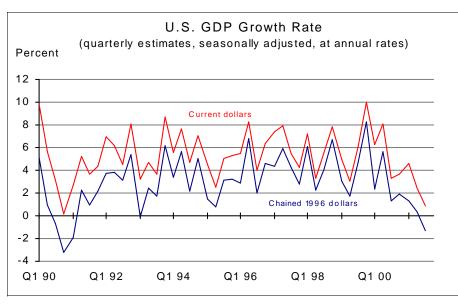
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GROWTH IN GROSS DOMESTIC PRODUCT







U.S. Gross Domestic Product	Q2 01	Q3 01
Billions of current dollars Percent change from previous quarter	10,203 <i>0.60</i>	10,225 <i>0.22</i>
Billions of chained 1996 dollars Percent change from previous quarter	9,342 <i>0.0</i> 8	9,310 <i>-0.34</i>

NOTES: Quarterly GDP data are presented at an annual rate.

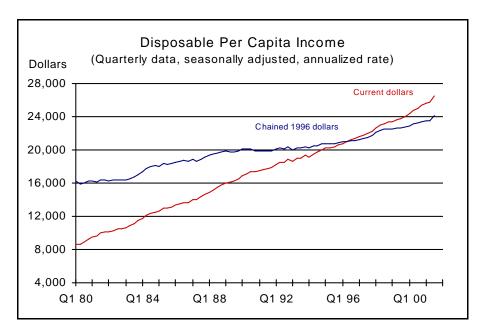
Chained 1996 dollars are calculated using chain-type indices, rather than constant dollars, to measure real GDP. The chain-type method first calculates the real changes between adjacent years. Annual rates of real changes are then chained (multiplied) together to obtain the rate of real changes between nonadjacent years. Chained dollars are preferable to constant dollars, which merely reflect overall price inflation, because chained dollars capture the effect of changes in the components of GDP.

SOURCE: U.S. Department of Commerce, Bureau of Economic Analysis, National Income and Products Accounts Data, December 21, 2001, available at: http://www.bea.doc.gov/bea/dn1.htm.

Gross Domestic Product (GDP) growth affects new demand for transportation services. The third quarter of 2001 was the first quarter since the first quarter of 1993 in which GDP did not grow in real terms.

GDP is the net output of goods and services produced by labor and property located in the United States. Real GDP is expressed in chained 1996 dollars.

DISPOSABLE PERSONAL INCOME



Although the economy has slowed significantly, disposable personal income in the third quarter of 2001 had its largest increase in real terms since the second quarter of 1975 at both the national and per capita levels. Two factors contributed to this increase. One was the advance refund checks sent to taxpayers beginning in July as part of the Economic Growth and Tax Relief Reconciliation Act of 2001, which lowered net income tax payments. In addition, the Act lowered income tax withholding rates beginning in July. As a result, personal tax and non-tax payments decreased \$138.1 billion in August and \$96.5 billion in July. The other factor was an increase in transfer payments in July, which reflected one-time payments to taxpayers to correct for underpayments of benefits associated with an error in the indexing for social security and supplemental security income benefits.

Per Capita Disposable Personal Income	Q2 01	Q3 01
Current dollars (annual rate) Percent change from previous quarter	25,798 <i>0.64</i>	26,457 2.55
Chained 1996 dollars (annual rate) Percent change from previous quarter	23,541 <i>0.30</i>	24,157 2.62

NOTES: Disposable personal income is personal income less personal tax and non-tax payments.

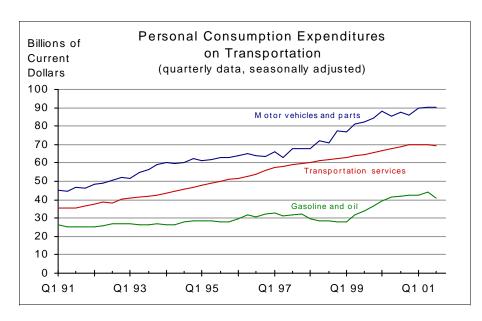
Chained 1996 dollars are calculated using chain-type indices, rather than constant dollars, to measure real changes in personal income. The chain-type method first calculates the real changes between adjacent years. Annual rates of real changes between adjacent years are then chained (multiplied) together to obtain the rate of real changes between nonadjacent years. Chained dollars are preferable to constant dollars because it avoids the bias of base year associated with constant dollars.

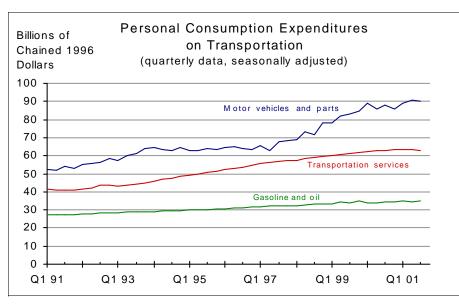
Historical data back through 1991 was revised in the most recent update. An explanation is available at this page: http://www.bea.doc.gov/bea/dn/nipaweb/note301p.htm .

SOURCE: U.S. Department of Commerce, Bureau of Economic Analysis, National Income and Products Accounts Data, Table 2.1; Dec. 21, 2001, available at: http://www.bea.doc.gov/bea/dn1.htm.



PERSONAL SPENDING ON TRANSPORTATION





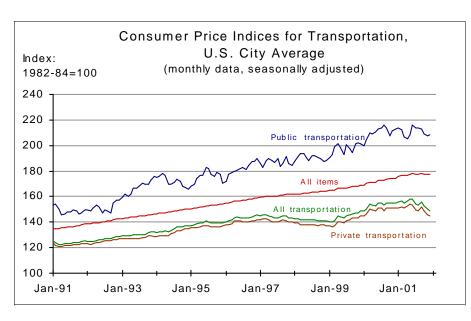
Personal Consumption Expenditures (billions of current dollars)	Q2 01	Q3 01
Motor vehicles and parts	90.58	90.08
Percent change from previous quarter	1.03	-0.55
Transportation services Percent change from previous quarter	69.95 <i>-0.25</i>	69.38 <i>-0.82</i>
Gasoline and oil Percent change from previous quarter	44.33 <i>4.60</i>	40.85 -7.84

Personal Consumption Expenditures (billions of chained 1996 dollars)	Q2 01	Q3 01
Motor vehicles and parts	90.48	90.38
Percent change from previous quarter	1.37	-0.11
Transportation services Percent change from previous quarter	63.55 -0.08	63.00 -0.87
Gasoline and oil Percent change from previous quarter	34.43 -0.86	35.03 1.74

SOURCE: U.S. Department of Commerce, Bureau of Economic Analysis, estimates based on *Survey of Current Business*, November 2001, NIPA Tables 2.2 and 2.3.

Personal expenditures on transportation are a measure of consumer demand for transportation services. Since expenditures are the product of quantity and price, these expenditures are also influenced by changes in the prices of transportation-related goods and services. To show the "real" changes in demand for transportation services over time, the expenditures are also presented in chained 1996 dollars. The traditional constant dollar measure is different from the chained dollar measure in that chained dollars gets rid of the effects of short-term price shocks, in addition to general inflation effects. Therefore, expenditures measured in chained 1996 dollars reflect changes in quantities. For items with volatile prices, such as gasoline, changes in chained dollar expenditure over time can be very different from changes in current dollar expenditures.

PRICES OF TRANSPORTATION SERVICES PAID BY AMERICAN HOUSEHOLDS



The Consumer Price Index (CPI) tracks the price of a market basket of goods and services purchased by U.S. households over time. Both monthly and annual changes are reported in the tables for the CPI in order to facilitate comparison with other series.

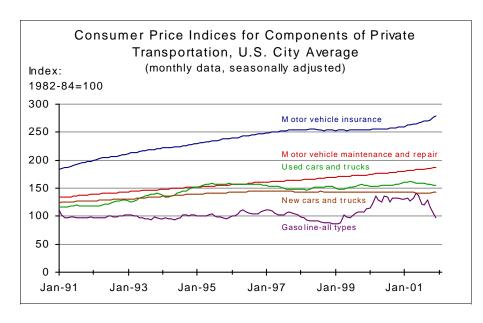
NOTE: 1982-1984=100: The consumer price index for a specific item is a weighted average of the prices for the individual components of the item. The weights are determined by the expenditure shares of the individual components based on a survey of consumer expenditure during the base year(s). The base year price is then normalized to 100. For some items, the Bureau of Labor Statistics establishes weights using several years of consumer expenditure surveys in order to smooth out the effects of short-term price shocks and of the business cycle. Weights formed using several years will give a more accurate measure of typical consumer expenditure patterns.

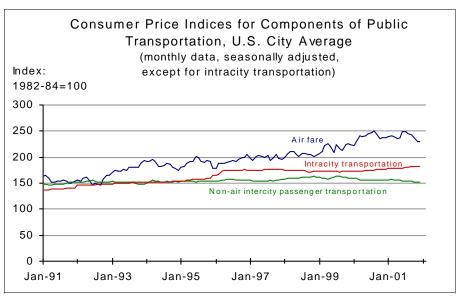
Price Index (1982-84=100)	Nov-01	Dec-01
Public transportation Percent change from previous month	207.2 -0.81	208.3 <i>0.5</i> 3
All items Percent change from previous month	177.6 <i>0.00</i>	177.3 -0.17
All transportation Percent change from previous month	150.2 -1.51	149.0 <i>-0.80</i>
Private transportation Percent change from previous month	146.0 <i>-1.6</i> 2	144.7 -0.89

Price Index (1982-84=100)	Dec-00	Dec-01
Public transportation Percent change from same month previous year	213.0 <i>5.86</i>	208.3 <i>-2.21</i>
All items Percent change from same month previous year	174.6 3.44	177.3 <i>1.5</i> 5
All transportation Percent change from same month previous year	155.0 <i>4.4</i> 5	149.0 -3.87
Private transportation Percent change from same month previous year	150.8 <i>4.2</i> 9	144.7 <i>-4.0</i> 5



CONSUMER PRICES FOR TRANSPORTATION





Price Index (1982-84=100)	Nov-01	Dec-01
Motor vehicle insurance	276.9	278.0
Percent change from previous month	1.80	0.40
Motor vehicle maintenance and repair	186.2	186.4
Percent change from previous month	0.27	0.11
Used cars and trucks	155.8	156.1
Percent change from previous month	-0.26	0.19
New cars and trucks	142.5	142.8
Percent change from previous month	0.56	0.21
Gasoline all types	103.9	97.7
Percent change from previous month	-10.12	-5.97
Airfare	230.0	229.0
Percent change from previous month	-2.71	-0.43
Intracity transportation (not seasonally adjusted)	181.9	182.3
Percent change from previous month	0.06	0.22
Non-air intercity passenger transportation	151.3	152.3
Percent change from previous month	-0.85	0.66

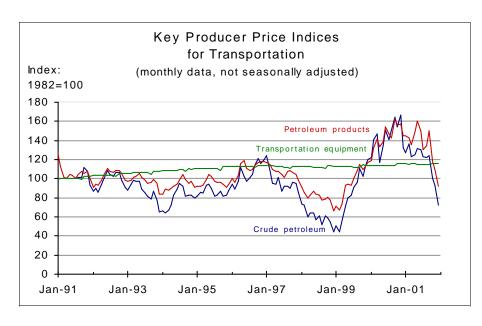
NOTE: Other Intercity passenger transportation consists of Amtrak, commuter rail, buses, and other for-hire nonair modes of transportation between urban areas.

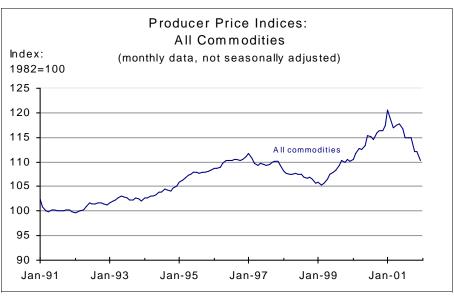
SOURCE: U.S. Department of Labor, Bureau of Labor Statistics, available at: http://www.bls.gov/cpi/.

The transportation component index of the CPI shows changes in transportation prices for consumers, and includes motor vehicle insurance, maintenance and repair, used and new cars and trucks, gasoline (all types), air fare, and intercity transportation.



PRODUCER PRICES OF KEY TRANSPORTATION INPUTS





Price Index (1982=100)	Dec-00	Dec-01
Petroleum products Percent change from same month previous year	144.7 24.29	92.6 -36. <i>0</i> 3
Crude Petroleum Percent change from same month previous year	132.9 10.99	72.7 -45.30
All commodities Percent change from same month previous year	117.3 6.57	110.2 -6. <i>02</i>
Transportation equipment Percent change from same month previous year	115.8 <i>1.54</i>	115.4 <i>-0.27</i>

NOTES: The current value is compared to the value from the same period in the previous year to account for seasonality.

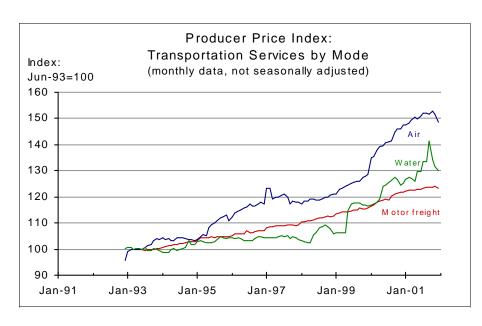
Data from September 2001 to December 2001 are preliminary. A more complete description of producer prices is given in Chapter 14 of the *BLS Handbook of Methods*, available at: http://www.bls.gov/opub/hom/homch14_e.htm.

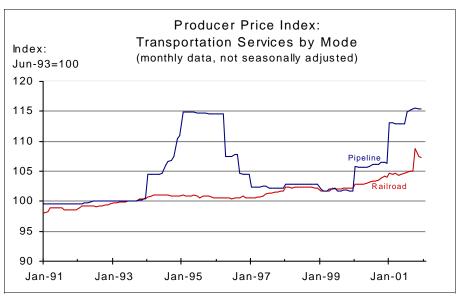
SOURCE: U.S. Department of Labor, Bureau of Labor Statistics, available at: http://www.bls.gov/ppi/.

Producer prices are those charged for the output of firms in a particular industry, or by all firms, regardless of industrial classification, for a particular commodity. These prices exclude markups at later stages of processing and the retail level. Producer prices reflect prices charged to anyone purchasing directly from the firm, including consumers, when the firm also serves as a retailer.

Changes in producer prices for transportation inputs suggest the direction of future costs for providing transportation services. Motor vehicle prices are strongly seasonal, declining as the model year culminates each September.

PRODUCER PRICES OF FOR-HIRE TRANSPORTATION SERVICES





Price Index (Jun-93=100)	Dec-00	Dec-01
Air transportation	147.7	148.6
Percent change from same month previous year	14.98	0.65
Water transportation	125.4	130.1
Percent change from same month previous year	7.67	3.76
Motor freight transportation and warehousing	121.9	123.2
Percent change from same month previous year	5.27	1.07
Pipelines, excluding natural gas	106.3	115.3
Percent change from same month previous year	4.48	8. <i>4</i> 8
Railroad transportation	104.1	107.3
Percent change from same month previous year	1.77	3.12

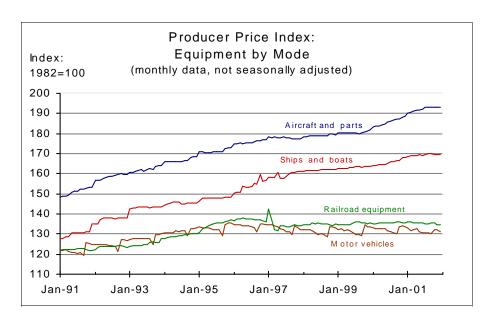
NOTES: The current value is compared to the value from the same period in the previous year to account for seasonality.

Data from September 2001 to December 2001 are preliminary. The original data for the indices in this table have different base periods. For comparability, the indices have been adjusted to have a common base period (1993).

SOURCE: U.S. Department of Labor, Bureau of Labor Statistics, available at: http://www.bls.gov/ppi/.

Producer prices reflect prices charged to anyone, including consumers when the firm also serves as a retailer. Actual prices to users of transportation services will differ due to substitution between domestic and foreign markets, and substitution between user-and market-provided services.

PRODUCER PRICES FOR TRANSPORTATION EQUIPMENT



Equipment cost accounts for approximately 47 percent of the total cost of user-operated transportation services. In the past decade, producer prices for transportation equipment have undergone a gradual but consistent increase. Increases in the producer prices for aircraft and parts and for ships and boats contributed most significantly to the rise in overall producer prices for transportation equipment. The increase in producer prices for railroad equipment and motor vehicles has been much slower, remaining at nearly the same level since 1997.

Motor vehicle prices are strongly seasonal, declining as the model year culminates each September.

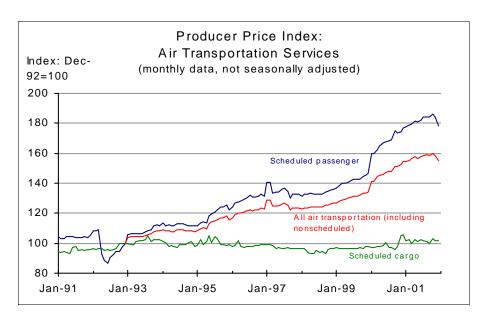
Price Index (1982=100)	Dec-00	Dec-01
Aircraft and parts Percent change from same month previous year	188.5 3.75	193.1 <i>2.44</i>
Ships and boats Percent change from same month previous year	168.2 2.81	169.7 <i>0.89</i>
Railroad equipment Percent change from same month previous year	135.8 <i>0.22</i>	134.5 -0.96
Motor vehicles and motor vehicle equipment Percent change from same month previous year	133.7 <i>0.15</i>	131.2 -1.87

NOTES: The current value is compared to the value from the same period in the previous year to account for seasonality.

Data from September 2001 to December 2001 are preliminary.



PRODUCER PRICES OF AIR TRANSPORTATION SERVICES



Producer prices for scheduled air transportation services represent prices for business and personal travel, as well as shipment of high-value freight. Because producers also act as retailers, a change in prices charged by airlines is immediately passed on to consumers.

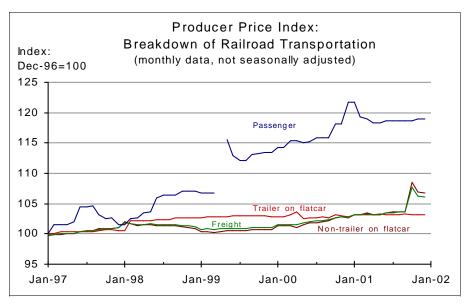
Price Index (Dec-92=100)	Dec-00	Dec-01
Scheduled air transportation - passenger Percent change from same month previous year	177.2 20.93	178.1 <i>0.5</i> 2
All air transportation (including nonscheduled) Percent change from same month previous year	154.3 14.98	155.3 <i>0.65</i>
Scheduled air transportation - cargo Percent change from same month previous year	105.4 <i>7.7</i> 8	101.7 -3.52

NOTES: The current value is compared to the value from the same period in the previous year to account for seasonality.

Data from September 2001 to December 2001 are preliminary.



PRODUCER PRICES OF RAILROAD TRANSPORTATION SERVICES



NOTE: U.S Department of Labor, Bureau of Labor Statistics reports missing data for April 1999 for passenger transportation.

Producer prices for rail transportation indicate prices to producers for freight and to passengers for intercity travel. Rail transportation of trailers is an important component of intermodal freight transportation. See indicator for prices of transportation services for the aggregated producer price index for rail transportation services.

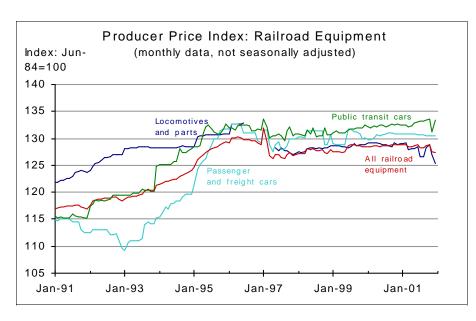
Price Index (Dec-96=100)	Dec-00	Dec-01
Passenger Percent change from the same month previous year	121.7 7.32	119.0 <i>-</i> 2.22
Non-trailer on flatcar Percent change from the same month previous year	102.6 <i>1.89</i>	106.7 <i>4.00</i>
Freight Percent change from the same month previous year	102.6 <i>1.4</i> 8	106.1 <i>3.41</i>
Trailer on flatcar Percent change from the same month previous year	102.8 <i>0.00</i>	103.2 <i>0.39</i>

NOTES: The current value is compared to the value from the same period in the previous year to account for seasonality.

Data from September 2001 to December 2001 are preliminary.



PRODUCER PRICES OF RAILROAD EQUIPMENT



Rail equipment represents a major cost to rail service providers.

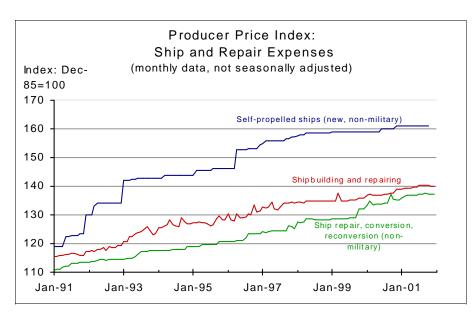
Price Index (Jun-84=100)	Dec-00	Dec-01
Public transit cars, all rebuilt cars, and all car parts Percent change from same month previous year	132.4 -0.08	133.4 <i>0.7</i> 6
Passenger and freight cars, new (excluding parts) Percent change from same month previous year	130.8 <i>0.54</i>	130.4 <i>-0.31</i>
Locomotives and parts Percent change from same month previous year	129.0 <i>0.16</i>	125.3 <i>-</i> 2.87
All railroad equipment Percent change from same month previous year	128.8 <i>0.</i> 23	127.4 -1.09

NOTES: The current value is compared to the value from the same period in the previous year to account for seasonality.

Data from September 2001 to December 2001 are preliminary. The series presented on this page use an industry-based PPI, rather than the commodity-based PPI used on page 51, because the industry-based PPI was less affected by these events.

Data for July, 1996 to April, 1997 for locomotives were affected by a strike at GM, and a revision of the BLS weighting scheme. Data for this period are anomalous, and are not depicted in the graph.

PRODUCER PRICES OF EQUIPMENT AND REPAIR SERVICES FOR WATER TRANSPORTATION



Shipbuilding and repair expenses are major costs in providing water transportation services.

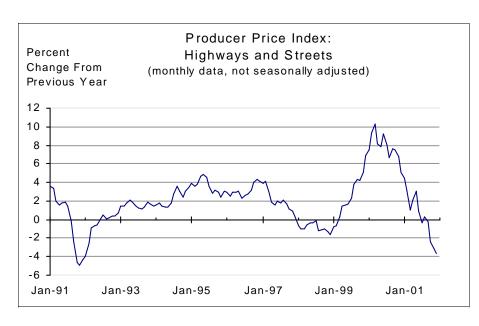
Price Index (Dec-85=100)	Dec-00	Dec-01
Self-propelled ships (new, non-military) Percent change from same month previous year	160.9 <i>1.26</i>	160.9 <i>0.00</i>
Ship building and repairing Percent change from same month previous year	139.0 2.21	140.1 <i>0.7</i> 9
Ship repair, conversion, reconversion (non-military) Percent change from same month previous year	135.3 <i>2.4</i> 2	137.4 <i>1.5</i> 5

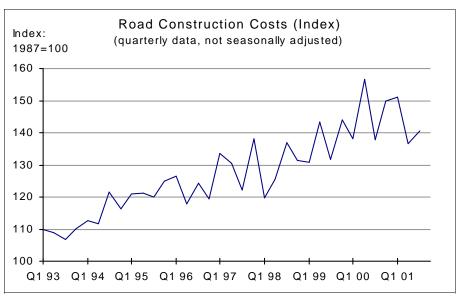
NOTES: The current value is compared to the value from the same period in the previous year to account for seasonality.

Data from September 2001 to December 2001 are preliminary. Data for new, nonmilitary self-propelled ships was not available for November 2001.



PRODUCER PRICES OF HIGHWAY AND STREET CONSTRUCTION





Producer Price Index (Jun-86=100)	Dec-00	Dec-01
Highways and Streets	137.3	132.3
Percent change from same month previous year	5.05	-3.64

NOTES: The current value is compared to the value from the same period in the previous year to account for seasonality.

Data from September 2001 to December 2001 are preliminary.

SOURCE: U.S. Department of Labor, Bureau of Labor Statistics, available at: http://www.bls.gov/ppi/.

Highway and street construction prices for the 12 months ending in November 2001 declined at the fastest rate since the end of the previous recession. These construction producer prices exclude direct labor costs and are primarily composed of prices for primary commodities: lumber, iron, concrete. Because demand from the overall construction is sensitive to income, prices for these components will be cyclical. Prices may lag changes in income due to the continuation of projects underway and contractual arrangements.

Road Construction Costs Index: (1987 = 100)	Q3 00	Q3 01
Road construction costs	137.9	140.6
Percent change from same quarter previous year	4.63	1.96

NOTES: The current value is compared to the value from the same period in the previous year to account for seasonality.

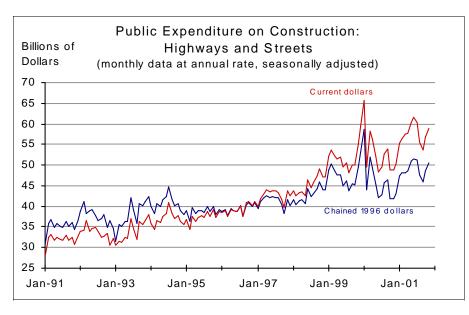
Trends in highway construction costs are measured by an index of average contract prices compiled from reports of state highway contract awards for federal-aid contracts greater than \$500,000. Since the enactment of the Intermodal Surface Transportation Efficiency Act of 1991, the index reflects federal-aid contracts on the National Highway System.

SOURCE: U.S. Department of Transportation, Federal Highway Administration, publication FHWA-IF-02-007, Jan. 10, 2002, and previous releases.

Construction prices for highways and streets represent the price to government in providing a key component of transportation infrastructure.



PUBLIC EXPENDITURES ON CONSTRUCTION OF HIGHWAYS AND STREETS



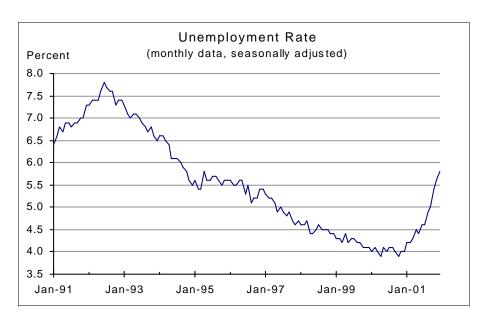
Highways and streets are the largest component of public transportation infrastructure spending.

Public Expenditure on Construction	Oct-01	Nov-01
Highways and streets (billions of current dollars) Percent change from previous month	56.75 6.01	58.93 3.85
Highways and streets (billions of chained 1996 dollars) Percent change from previous month	48.50 <i>5.8</i> 2	50.54 <i>4.</i> 21

NOTE: The data has changed due to new Census Bureau estimating methodologies. Questions can be directed to Mike Davis, 301-457-1605.

SOURCE: U.S. Department of Commerce, Bureau of the Census, available at: http://www.census.gov/pub/const/C30/c30curtb.html.

UNEMPLOYMENT RATE



The generally low unemployment rate in recent years suggests a tight labor market for industry in general, which includes transportation firms. It also suggests increased demand for transportation to and from work, as well as for leisure travel.

Civilian Labor Force	Nov-01	Dec-01
Unemployment rate (percent)	5.6	5.8
Number of unemployed (thousands)	8,026	8,259

SOURCE: U.S. Department of Labor, Bureau of Labor Statistics, Overall BLS Most Requested Series, available at: http://stats.bls.gov/data/home.htm.

UNEMPLOYMENT RATES FOR SELECTED METROPOLITAN AREAS AND CITIES, NOVEMBER 2000 AND 2001 (in percent)

Ranked by Metropolitan Area Unemployment, November 2001

	November 2000		November 2001	
	Metropolitan City		Metropolitan	City
City	Area	City	Area	City
Portland, OR-WA CMSA	3.4	3.8	6.9	7.9
Miami, FL CMSA	4.7	7.9	6.7	10.9
Seattle, WA CMSA	3.9	4 .1	6.1	6.8
Chicago, IL-IN-WI CMSA	4.0	5.6	5.5	7.2
Dallas, TX CMSA	2.8	3.7	5.5	7.5
Fort Worth, TX		3.8		6.4
Los Angeles, CA CMSA	4.4	5.6	5.3	6.7
Long Beach, CA		4.6		5.5
San Francisco, CA CMSA	2.3	2.7	5.2	6.1
Oakland, CA		4 .1		8.8
San Jose, CA		1.8		7.7
Detroit, MI CMSA	2.9	5.8	5.0	9.4
New York, NY·NJ·CT·PA CMSA	3.8	5.4	5.0	6.8
Cleveland, OH CMSA	3.8	0.8	5.0	9.9
Phoenix, AZ MSA	2.5	2.7	4.8	5.2
Denver, CO CMSA	2.2	3.0	4.6	5.5
Houston, TX CMSA	3.7	4.4	4.5	5.4
St. Louis, MO·IL MSA	3.4	6.1	4.5	7.8
Philadelphia, PA-NJ-DE-MD CMSA	4.1	6.4	4.4	6.4
Pittsburgh, PA MSA	4.0	4.0	4.3	4.0
Boston, MA-NH-ME-CT CMSA	2.1	2.6	4 .1	4.5
Atlanta, GA MSA	2.5	4.3	3.9	6.7
Washington, DC-MD-VA-WV CMSA	2.9	5.9	3.8	6.4
Baltimore, MD		7.8		7.9
Tampa,FL CMSA	2.6	3.1	3.8	4.6
San Diego, CA MSA	2.7	2.7	3.5	3.5
Minneapolis, MN-WI MSA	2.3	2.8	3.3	4.0

NOTES: Cities with population greater than 400,000 which are part of the CMSA, but not the city listed as the main city, have unemployment listed below that of the main city.

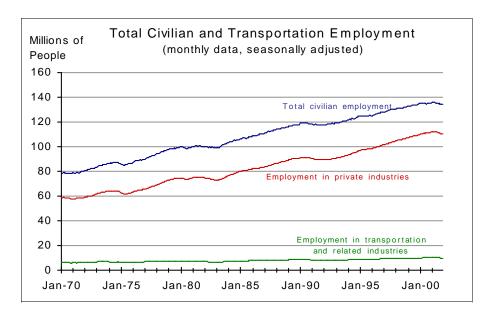
Definitions of Metropolitan Statistical Area (MSA) and Consolidated Metropolitan Statistical Area (CMSA) are available on the Census Bureau web site at:

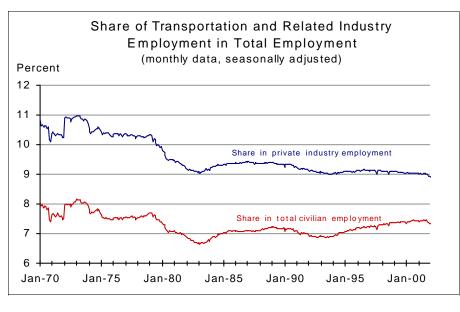
http://www.census.gov/population/www/estimates/aboutmetro.html)

Source: U.S. Department of Labor, Bureau of Labor Statistics, http://www.bls.gov/data/home.htm



TRANSPORTATION EMPLOYMENT





Employment (thousands)	Nov-01	Dec-01
Total civilian employment Percent change from previous month	134,253 <i>-0.27</i>	134,055 <i>-0.15</i>
Employment in private industries Percent change from previous month	110,402 <i>-0.34</i>	110,215 <i>-0.17</i>
Employment in transport and related industries Percent change from previous month	9,850 <i>-0.65</i>	9,809 <i>-0.4</i> 2

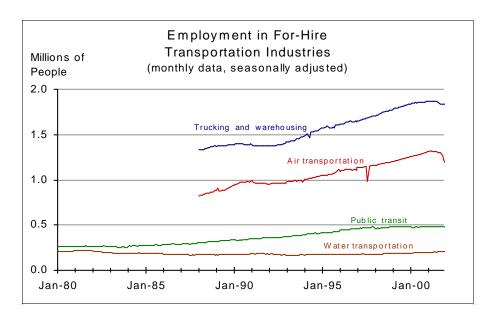
Share of Transportation and Related Industry Employment (percent)	Nov-01	Dec-01
As share of private industry employment Change from previous month	7.34 -0.38	7.32 -0.27
As share of total civilian employment Change from previous month	8.92 -0.30	8.90 <i>-0.25</i>

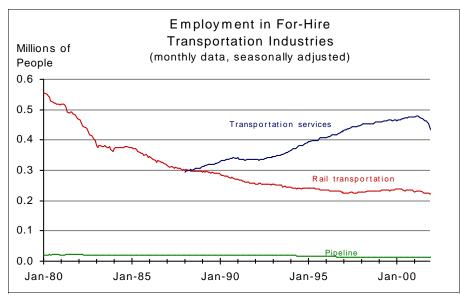
SOURCE: U.S. Department of Labor, Bureau of Labor Statistics, Employment Status of Civilian Population by sex and age ("A" Tables) and Employees on nonfarm payrolls by industry ("B" Tables), available at: http://www.bls.gov/cps/home.htm.

One broad measure of transportation employment is employment in transportation-related industries, including for-hire transportation (railroad, trucking, air, water, pipeline, transit, and transportation services) and industries that support transportation directly (e.g., motor vehicle and equipment manufacturing, aircraft manufacturing, auto dealers and service stations, and auto repair and parking services).

Transportation-related industry employment does not include transportation occupations in non-transportation industries, such as truck drivers working for wholesale and retail stores. When employment in transportation occupations in non-transportation industries is included, total transportation-related employment accounts for about 13 percent of U.S. civilian jobs.

FOR-HIRE TRANSPORTATION EMPLOYMENT





Employment in For-Hire Transportation Industries (thousands)	Nov-01	Dec-01
Trucking and warehousing	1,832	1,833
Percent change from previous month	0.00	0.05
Air transportation	1,215	1,189
Percent change from previous month	-3.88	-2.14
Public transit	480	485
Percent change from previous month	0.21	1.04
Transportation services	441	435
Percent change from previous month	-2.43	-1.36
Rail transportation	223	223
Percent change from previous month	-0.89	0.00
Water transportation	204	205
Percent change from previous month	-0.97	0.49
Pipeline	14	14
Percent change from previous month	0.00	0.00

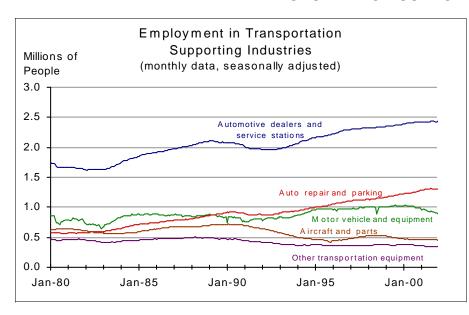
NOTE: For-hire transportation includes establishments providing passenger and freight transportation and related services on a fee basis to the general public or other business enterprises. For-hire does not include in-house transportation establishments within nontransportation enterprises, which provide transportation services for the enterprises' own use. Transportation services includes establishments furnishing services incidental to transportation, such as forwarding and packing services, and the arrangement of passenger and freight transportation.

SOURCE: U.S. Department of Labor, Bureau of Labor Statistics, Employment Status of Civilian Population by sex and age ("A" Tables) and Employees on nonfarm payrolls by industry ("B" Tables), available at: http://www.bls.gov/cps/home.htm.

Employment in for-hire transportation industries accounted for about 45 percent of total transportation-related industry employment in recent years. The trucking and warehousing industry and air transportation together accounted for about 70 percent of the employment in for-hire transportation in the last few years.



TRANSPORTATION SUPPORTING INDUSTRY EMPLOYMENT



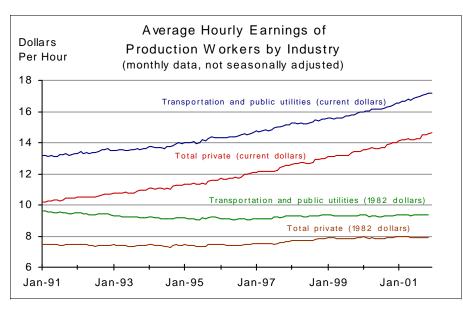
Employment in transportation supporting industries accounts for over half of total transportation-related industry employment. Automotive dealers and service stations employ the most people among transportation supporting industries. Employment of automotive dealers and service stations increased 0.21 percent in December 2001. At the same time, employment of motor vehicle and equipment manufacturing decreased 0.77.

Employment in Transportation Supporting Industries (thousands)	Nov-01	Dec-01
Auto dealers and service stations	2,429	2,434
Percent change from previous month	0.00	0.21
Auto repair and parking	1,305	1,302
Percent change from previous month	0.54	-0.23
Motor vehicle and equipment manufacturing	904	897
Percent change from previous month	0.11	-0.77
Aircraft and parts manufacturing	457	448
Percent change from previous month	-1.30	-1.97
Other transportation equipment manufacturing	346	344
Percent change from previous month	-0.86	-0.58

SOURCE: U.S. Department of Labor, Bureau of Labor Statistics, Employment Status of Civilian Population by sex and age ("A" Tables) and Employees on nonfarm payrolls by industry ("B" Tables), available at: http://www.bls.gov/cps/home.htm.



HOURLY EARNINGS OF PRODUCTION WORKERS IN TRANSPORTATION INDUSTRIES



Hourly earnings are the actual return to the worker for an hour worked. They are on a "gross" basis because they include not only basic hourly and incentive wage rates, but also such variable factors as premium pay for overtime and late-shift work. However, average hourly earnings are not average hourly labor costs to employers because they do not include irregular bonuses, retroactive items, payments of various welfare benefits, payroll taxes paid by employers, and earnings for those employees not covered under production worker, construction worker, or non-supervisory employee definitions.

Changes in average hourly earnings indicate the changes in the actual return to production workers. They also reflect shifts in the number of employees between relatively high-paid and low-paid work.

Average Hourly Earnings	Nov-00	Nov-01
Transportation and public utilities (current dollars) Percent change from same month previous year	16.43 3.33	17.19 <i>4.6</i> 3
Total private (current dollars) Percent change from same month previous year	13.98 <i>4.10</i>	14.56 <i>4.15</i>
Transportation and public utilities (1982 dollars) Percent change from same month previous year	9.31 <i>-0.21</i>	9.34 <i>0</i> .32
Total private (1982 dollars) Percent change from same month previous year	7.93 <i>0.6</i> 3	7.89 -0.50

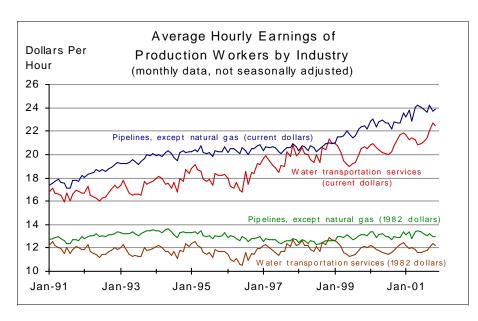
NOTES: The current value is compared to the value from the same period in the previous year to account for seasonality.

In the transportation industry, production workers include vehicle operators, vehicle maintenance and repair workers, transportation facility operators, and workers directly engaged in providing passenger and freight transportation services.

SOURCE: U.S. Department of Labor, Bureau of Labor Statistics, National Employment, Hours, and Earnings, available at http://www.bls.gov/ncs/ect/.



HOURLY EARNINGS OF PIPELINE AND WATER TRANSPORTATION WORKERS



Transportation industry hourly earnings are the actual return to production workers in transportation industries for an hour worked. Changes in average transportation industry hourly earnings may be caused by either changes in production workers' hourly wage rates or shifts in the number of workers between relatively high-paid occupations and low-paid occupations.

Average Hourly Earnings	Nov-00	Nov-01
Pipelines, except natural gas (current dollars) Percent change from same month previous year	22.73 1.25	23.90 <i>5.15</i>
Water transportation services (current dollars) Percent change from same month previous year	21.66 <i>4.69</i>	22.42 3.51
Pipelines, except natural gas (1982 dollars) Percent change from same month previous year	12.88 -2.23	12.99 <i>0.8</i> 2
Water transportation services (1982 dollars) Percent change from same month previous year	12.27 1.09	12.18 <i>-0.7</i> 5

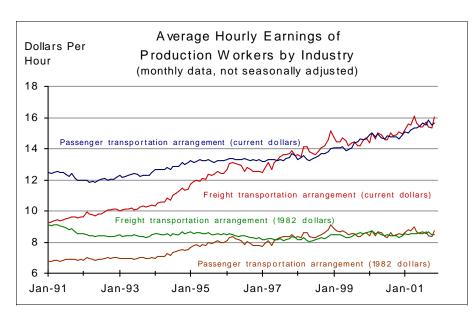
NOTES: The current value is compared to the value from the same period in the previous year to account for seasonality.

In the transportation industry, production workers include vehicle operators, vehicle maintenance and repair workers, transportation facility operators, and workers directly engaged in providing passenger and freight transportation services.

SOURCE: U.S. Department of Labor, Bureau of Labor Statistics, National Employment, Hours, and Earnings, available at http://www.bls.gov/ncs/ect/.



HOURLY EARNINGS OF WORKERS IN TRANSPORTATION ARRANGEMENT SERVICES



Between November 2000 and November 2001, the average hourly earnings, measured in current dollars, increased in both passenger transportation arrangement and freight transportation arrangement.

Average Hourly Earnings	Nov-00	Nov-01
Freight transportation arrangement (current dollars)	15.11	16.06
Percent change from same month previous year	3.49	6.29
Passenger transportation arrangement (current dollars)	14.66	15.65
Percent change from same month previous year	0.62	6.75
Freight transportation arrangement (1982 dollars)	8.56	8.73
Percent change from same month previous year	-0.06	1.92
Passenger transportation arrangement (1982 dollars)	8.31	8.50
Percent change from same month previous year	-2.84	2.36

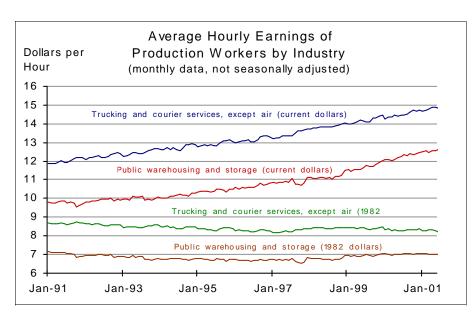
NOTES: The current value is compared to the value from the same period in the previous year to account for seasonality.

Passenger transportation arrangement includes travel agencies, tour operators, and other establishments primarily engaged in arranging passenger transportation, such as ticket offices, not operated by transportation companies, for railroads, buses, ships, and airlines.

Freight transportation arrangement includes establishments primarily engaged in furnishing information and acting as agents in arranging transportation for freight and cargo, such as shipping agents, freight consolidators, shipping document preparation and tariff consultants.

 $SOURCE: U.S.\ Department\ of\ Labor,\ Bureau\ of\ Labor\ Statistics,\ \ National\ Employment,\ Hours,\ and\ Earnings,\ available\ at \ http://www.bls.gov/ncs/ect/.$

HOURLY EARNINGS OF WORKERS IN TRUCKING AND PUBLIC WAREHOUSING SERVICES



Measured in current dollars, the average hourly earnings of workers in trucking and courier services and workers in warehousing and storage services have increased in recent years. However, taking the effect of inflation into account, real hourly earnings of workers in the two industries have remained at about the same level since the early Nineties.

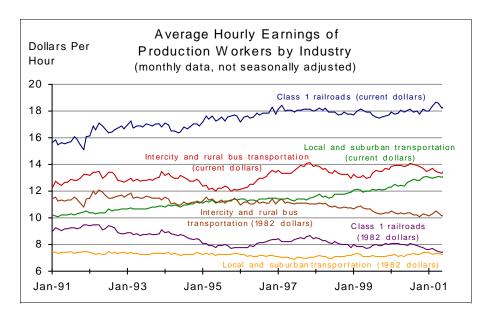
Average Hourly Earnings	Nov-00	Nov-01
Trucking and courier services, except air (current dollars) Percent change from same month previous year	14.70 2.08	15.15 3.06
Public warehousing and storage (current dollars) Percent change from same month previous year	12.42 <i>4.0</i> 2	12.94 <i>4.1</i> 9
Trucking and courier services, except air (1982 dollars) Percent change from same month previous year	8.33 -1.42	8.23 -1.18
Public warehousing and storage (1982 dollars) Percent change from same month previous year	7.04 0.45	7.03 -0.10

NOTE: The current value is compared to the value from the same period in the previous year to account for seasonality.

SOURCE: U.S. Department of Labor, Bureau of Labor Statistics, National Employment, Hours, and Earnings, available at http://www.bls.gov/ncs/ect/.



HOURLY EARNINGS OF RAIL, BUS, AND TRANSIT WORKERS



Transportation industry hourly earnings are the actual return to production workers in transportation industries for an hour worked. Changes in average transportation industry hourly earnings may be caused by either changes in production workers' hourly wage rates or shifts in the number of workers between relatively high-paid occupations and low-paid occupations.

Between November 2000 and November 2001, the average hourly earnings in Class I Railroads decreased 0.22 percent, while average hourly earnings in local and suburban transportation services increased 2.38 percent. In contrast, the average hourly earnings in intercity and rural bus transportation services decreased 0.95 percent.

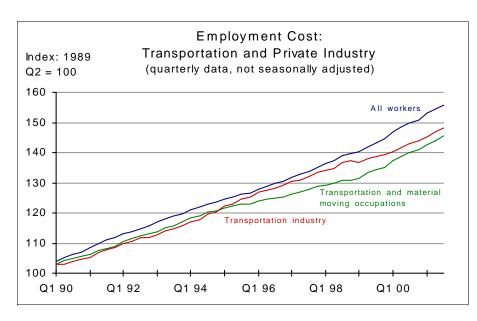
Average Hourly Earnings	Nov-00	Nov-01
Class I Railroads (current dollars)	18.13	18.09
Percent change from same month previous year	2.84	-0.22
Intercity and rural bus transportation (current dollars)	13.71	13.58
Percent change from same month previous year	0.00	-0.95
Local and suburban transportation (current dollars)	13.01	13.32
Percent change from same month previous year	6.81	2.38
Class I Railroads (1982 dollars)	10.27	9.83
Percent change from same month previous year	-0.69	-4.32
Intercity and rural bus transportation (1982 dollars)	7.77	7.38
Percent change from same month previous year	-3. <i>4</i> 3	<i>-5.0</i> 2
Local and suburban transportation (1982 dollars)	7.37	7.24
Percent change from same month previous year	3.15	-1.83

NOTE: The current value is compared to the value from the same period in the previous year to account for seasonality.

SOURCE: U.S. Department of Labor, Bureau of Labor Statistics, National Employment, Hours, and Earnings, available at http://www.bls.gov/ncs/ect/.



TRANSPORTATION AND PRIVATE INDUSTRY EMPLOYMENT COSTS



The Employment Cost Index (ECI) measures changes in the cost of labor to employers. Since the ECI is a fixed-employment-weighted index, it is free from the influence of employment shifts among occupations and industries.

Over the last decade, the rise of employment cost in the transportation industry was slower than in private industry as a whole and the rise of employment cost of transportation occupations was slower than the average of all workers. However, between the third quarter of 2000 and third quarter of 2001, employment cost of transportation occupations increased 4.07 percent, a slightly higher rate than the 4.00 percent for all workers. During the same period, the employment cost of transportation industry continued to increase at a rate slower than that of all workers.

Employment Cost: Total Compensation (Index)	Q3 00	Q3 01
All workers (private industry) Percent change from same quarter previous year	149.90 <i>4.61</i>	155.90 <i>4.00</i>
Transportation industry (private) Percent change from same quarter previous year	142.80 2.96	148.20 3.78
Transportation occupations (private) Percent change from same quarter previous year	139.90 <i>4.0</i> 9	145.60 <i>4.07</i>

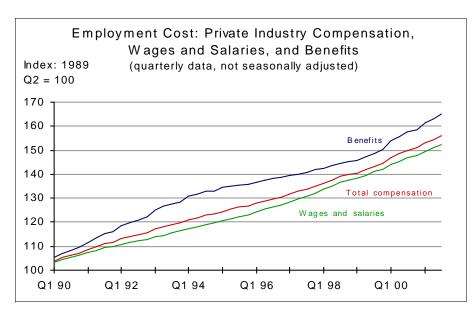
NOTES: The current value is compared to the value from the same period in the previous year to account for seasonality.

Employment cost to employers is the total compensation cost incurred by employers in obtaining labor inputs. Compensation costs include wages, salaries, and employer costs for employee benefits. Employment costs of transportation industry is the weighted average of the employment costs of all occupations working in transportation industries, including non-transportation industries. Employment costs of transportation occupations is the weighted average of the employment costs of all transportation occupations, including those working in non-transportation industries, such as truck drivers working for retail stores.

SOURCE: U.S. Department of Labor, Bureau of Labor Statistics, Employment Cost Trends, Public Query Data, available at http://www.bls.gov/ncs/ect/.



BREAKDOWN OF PRIVATE INDUSTRY EMPLOYMENT COSTS



Employment cost can be broken down into two major components, wages and salaries, and benefits. Benefit costs increased faster than wages and salaries for most industries over the last decade. Between the third quarter of 2000 and the third quarter of 2001, the average benefit costs of all workers in private industry rose 4.89 percent, while their average wage and salary rose 3.61 percent.

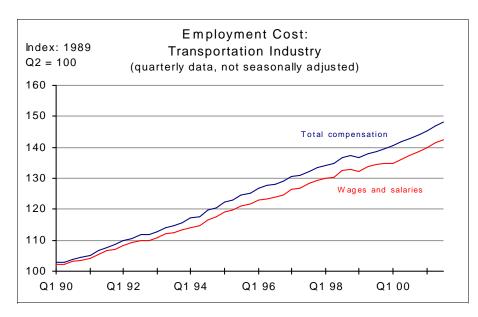
All Workers (Index)	Q3 00	Q3 01
Benefits (private industries)	157.50	165.20
Percent change from same quarter previous year	5.99	4.89
Total compensation (private industries) Percent change from same quarter previous year	149.90 <i>4.61</i>	155.90 <i>4.00</i>
Wages and salaries (private industries) Percent change from same quarter previous year	146.80 <i>4.11</i>	152.10 3.61

NOTES: The current value is compared to the value from the same period in the previous year to account for seasonality.

Employment cost to employers is the total compensation cost incurred by employers in obtaining labor inputs. Compensation costs include wages, salaries, and employer costs for employee benefits. Employment costs of transportation industry is the weighted average of the employment costs of all occupations working in transportation industries, including non-transportation industries. Employment costs of transportation occupations is the weighted average of the employment costs of all transportation occupations, including those working in non-transportation industries, such as truck drivers working for retail stores.

SOURCE: U.S. Department of Labor, Bureau of Labor Statistics, Employment Cost Trends, Public Query Data, available at http://www.bls.gov/ncs/ect/.

EMPLOYMENT COSTS FOR TRANSPORTATION INDUSTRIES



Labor cost is a significant portion of the production cost of every industry. This is particularly true for the transportation industries, which are much more labor intensive than industry as a whole. Changes in labor cost directly affect the price of transportation services, the profit margin, and competitiveness of the transportation industries.

As total compensation cost increases, the balance between wages and salaries and benefits also changes over time. These changes reflect changes in economic environment and labor management practices of employers.

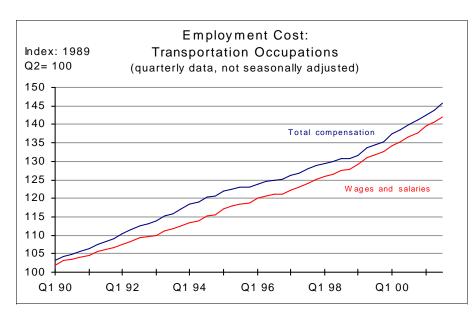
Transportation Industry (Index)	Q3 00	Q3 01
Total compensation (private) Percent change from same quarter previous year	142.80 2.96	148.20 3.78
Wages and salaries (private) Percent change from same quarter previous year	137.40 2.23	142.60 3.78

NOTES: The current value is compared to the value from the same period in the previous year to account for seasonality.

Employment costs of transportation industry is the weighted average of the employment costs of all occupations working in transportation industries, including nontransportation industries. Employment costs of transportation occupations is the weighted average of the employment costs of all transportation occupations, including those working in non-transportation industries, such as truck drivers working for retail stores.

SOURCE: U.S. Department of Labor, Bureau of Labor Statistics, Employment Cost Trends, available at http://www.bls.gov/ncs/ect/..

EMPLOYMENT COSTS IN TRANSPORTATION OCCUPATIONS



The increased share of wage and salary in total employment cost during the last year was also observed among transportation occupations. Between the third quarter of 2000 and the third quarter of 2001, total compensation of transportation occupations increased 4.07 percent, while wages and salaries of transportation occupations increased 4.10 percent, indicating benefits increased at a slightly slower rate during the same period.

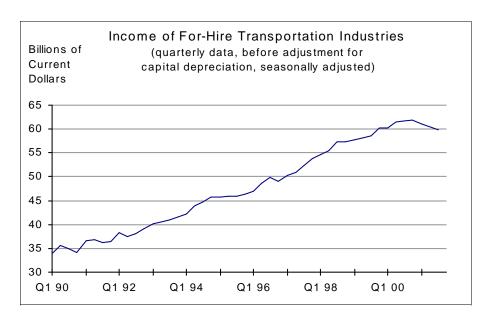
Transportation Occupations (Index)	Q3 00	Q3 01
Total compensation (private) Percent change from same quarter previous year	139.90 <i>4.09</i>	145.60 <i>4.07</i>
Wages and salaries (private) Percent change from same quarter previous year	136.50 3.49	142.10 <i>4.10</i>

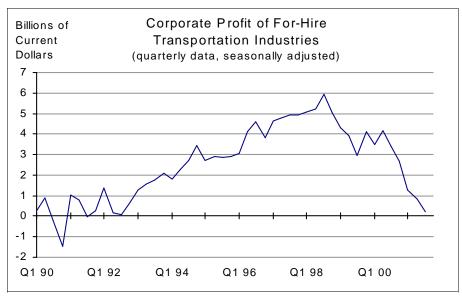
NOTES: The current value is compared to the value from the same period in the previous year to account for seasonality.

Employment costs of transportation industry is the weighted average of the employment costs of all occupations working in transportation industries, including nontransportation industries. Employment costs of transportation occupations is the weighted average of the employment costs of all transportation occupations, including those working in non-transportation industries, such as truck drivers working for retail stores.

SOURCE: U.S. Department of Labor, Bureau of Labor Statistics, Employment Cost Trends, available at http://www.bls.gov/ncs/ect/.

TRANSPORTATION INDUSTRY PROFIT AND INCOME





For-Hire Transportation Industries	Q2 01	Q3 01
Income (billions of dollars) Percent change from previous quarter	60.50 -0.98	59.73 -1.28
Profit (billions of dollars) Percent change from previous quarter	0.83 -35.29	0.23 -72.73

NOTES: For-hire transportation includes establishments providing passenger and freight transportation and related services on a fee basis to the general public or other business enterprises. For-hire does not include in-house transportation establishments within non-transportation enterprises, which provide transportation services for the enterprises' own use.

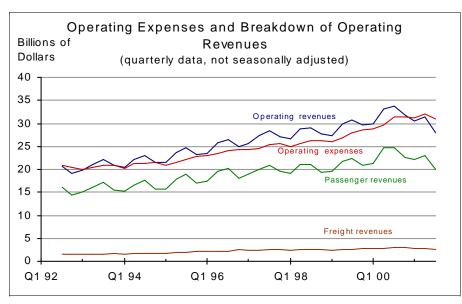
Income of a for-hire transportation industry is the difference between its revenue and the cost of its intermediate inputs (or goods and services consumed in providing transportation services). If an industry has no operations in foreign countries and its income comes entirely from its production activities (in contrast to, for example, financial activities), its income would be the same as its contribution to Gross Domestic Product.

SOURCE: U.S. Department of Commerce, Bureau of Economic Analysis, estimates based on *Survey of Current Business*, Dec. 21, 2001, NIPA Table 6.1C and Table 6.16C.

Income and profit are two measures of an industry's performance. Income growth of transportation industries has flattened out since the second quarter of last year. A 1.3 percent decrease was experienced in the third quarter of this year. Stagnant growth caused a sharp dip in transportation industries' profit. In the third quarter of 2001, the profit of transportation industries reached its lowest margin since the third quarter of 1992.



AIR CARRIER REAL OPERATING EXPENSES AND BREAKDOWN OF OPERATING REVENUES



NOTE: Data for DHL, which has not reported for third quarter 2001, are excluded for all periods for comparability over time.

Air carriers' major source of revenue is passenger fares. Freight revenue has increased in importance for large air carriers in recent years, but is much smaller than passenger revenue. Air carrier asset returns are highly seasonal due to the seasonality of passenger revenues.

Billion dollars	Q3 00	Q3 01
Operating revenues Percent change from same quarter previous year	33.71 9.92	27.92 -17.17
Operating expenses Percent change from same quarter previous year	31.30 11.77	31.07 <i>-0.71</i>
Passenger revenues Percent change from same quarter previous year	24.67 10.46	20.04 -18.77
Freight revenues Percent change from same quarter previous year	2.93 13.51	2.57 -12.27

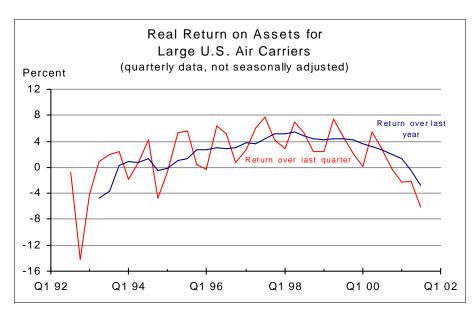
NOTES: Data for the last year are preliminary.

The current value is compared to the value from the same period in the previous year to account for seasonality.

The data include profits of both foreign and domestic operations for U.S. air carriers with more than 20 million dollars in annual operating revenue.

SOURCES: U.S. Department of Transportation, Bureau of Transportation Statistics, Air Carrier Financial Statistics data; and U.S. Department of Labor, Bureau of Labor Statistics, available at: http://www.bls.gov/cpi/.

AIR CARRIER REAL RETURN ON ASSETS



NOTE: Data for DHL, which has not reported for third quarter 2001, are excluded for all periods for comparability over time.

Return on assets is a measure of the profitability of investment adjusted for inflation. Improving profits depends on a combination of holding down costs while growing revenue.

Return on Assets for Large U.S. Air Carriers	Q3 00	Q3 01
Return over last quarter Percent change from same quarter previous year	2.83 -1.95	-6.13 -8.96
Return over last year Percent change from same quarter previous year	2.65 -1.68	-2.74 -5.40

NOTES: Data for the last year are preliminary.

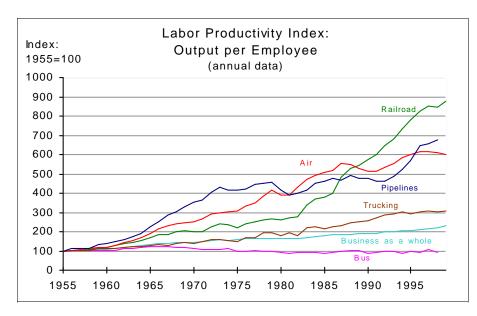
The current value is compared to the value from the same period in the previous year to account for seasonality.

Return on assets is the ratio of net income to the average of beginning- and end-of-period assets for large air carriers. When net income and assets are deflated using the average CPI, the nominal rate of return is converted into a real rate of return.

The data include profits of both foreign and domestic operations for U.S. air carriers with more than 20 million dollars in annual operating revenue.

SOURCES: U.S. Department of Transportation, Bureau of Transportation Statistics, Air Carrier Financial Statistics data; and U.S. Department of Labor, Bureau of Labor Statistics, available at: http://www.bls.gov/cpi/.

PRODUCTIVITY GROWTH



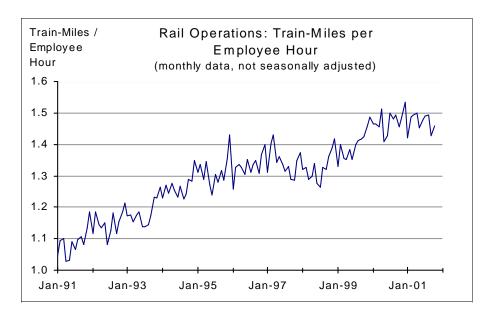
Productivity growth is the ultimate source for the increases of a nation's economic wealth and living standards. Transportation has been one of the leading sectors in productivity growth for the U.S. economy since 1955, when statistics on transportation productivity became available.

Productivity Index (1955=100)	1998	1999
Railroad	846	876
Percent change from previous year	-0.57	3.58
Pipelines (1997-1998)	658	677
Percent change from previous year	1.51	2.77
Air	612	598
Percent change from previous year	-0.81	-2.17
Trucking	301	305
Percent change from previous year	-1.89	1.31
Business as a whole	222	229
Percent change from previous year	2.57	2.96
Bus (1997-1998)	109	94
Percent change from previous year	17.23	-14.00

SOURCE: U.S. Department of Labor, Bureau of Labor Statistics, Office of Productivity and Technology, Index of Output per Employee, All Published Industries, Oct. 19, 2001.



RAILROAD LABOR PRODUCTIVITY



Train-miles per employee hour are used as a measure for labor productivity in rail-road transportation.

Total train miles include yard-switching miles.

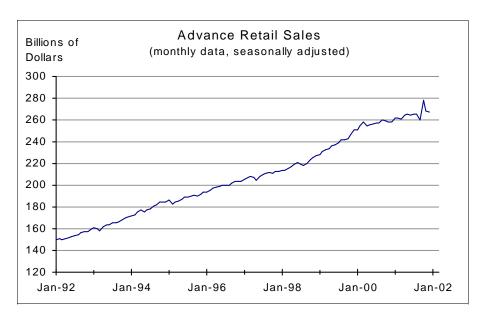
Rail Operations	Oct-00	Oct-01
Train-Miles/Employee hour	1.46	1.46
Percent change from same month previous year	2.18	0.28

NOTES: The current value is compared to the value from the same period in the previous year to account for seasonality.

This indicator of rail productivity differs from that shown in the previous page. The data sources are different, and this measure is based on train-miles while that on the previous page is based on ton-miles.

SOURCE: U.S. Department of Transportation, Federal Railroad Administration, Office of Safety Analysis, available at: http://safetydata.fra.dot.gov/officeofsafety/.

RETAIL SALES AND TRANSPORTATION DEMAND



Advance retail sales are a leading indicator of retailers' sales expectations and may suggest future demand for commercial transportation services. Retail stores may require faster and more reliable delivery of shipments as consumer demand increases and inventories are maintained at lower levels.

Advance Retail Sales	Nov-01	Dec-01
Advance retail sales (millions of dollars)	268,433	267,643
Percent change from previous month	-3 <i>.4</i> 2	-0.29

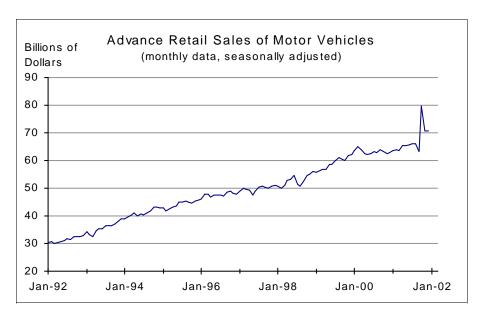
NOTE: Advance retail sales are advance estimates of monthly retail trade that are produced by the Bureau of the Census. The advance estimates are based on a small subsample of the Census Bureau's full retail sales sample.

In October 2001, advance retail sales reached \$278 billion. That spike was primarily due to the jump in advance sales of automobiles and other motor vehicles.

SOURCE: U.S. Department of Commerce, Bureau of the Census, as of Jan. 16, 2002, available at: http://www.census.gov/svsd/www/adseries.html.



ADVANCE RETAIL SALES OF MOTOR VEHICLES



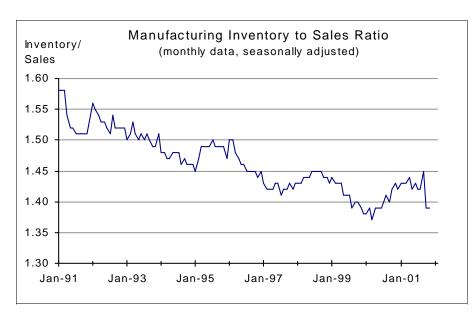
Motor vehicles are a major component of overall advance retail sales, accounting for twenty-six percent of the overall total for the month of December.

Advance Retail Sales of Motor Vehicles	Nov-01	Dec-01
Value of advance sales (in millions)	70,872	70,745
Percent change from previous month	-11.02	-0.18

NOTE: Advance retail sales are advance estimates of monthly retail trade that are produced by the Bureau of the Census. The advance estimates are based on a small subsample of the Census Bureau's full retail sales sample.

SOURCE: U.S. Department of Commerce, Bureau of the Census, as of Jan. 16, 2002, available at: http://www.census.gov/svsd/www/adseries.html.

LEVEL OF MANUFACTURING INVENTORY



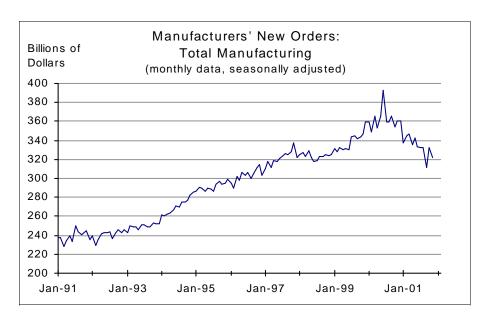
Manufacturing inventory to sales ratio indicates the level of inventory that manufacturers currently maintain to meet a given sales volume. Over time, manufacturers have reduced inventory in relation to sales. Increased speed and reliability of transportation help manufacturers operate with smaller inventories.

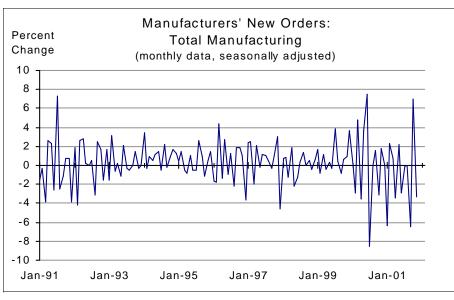
Manufacturing Inventory to Sales	Oct-01	Nov-01
Inventory/sales ratio	1.39	1.39
Percent change from previous month	-4.14	0.00

NOTE: The Census Bureau released revised historical new orders data on May 21, 2001. This report reflects those revisions.

SOURCE: U.S. Department of Commerce, Bureau of the Census, as of Jan. 16, 2002, available at: http://www.census.gov/mtis/www/mtis.html.

NEW ORDERS—ALL MANUFACTURING





Manufacturers' New Orders	Oct-01	Nov-01
Total manufacturing (billions of dollars)	332.77	321.70
Percent change from previous month	7.01	-3.33

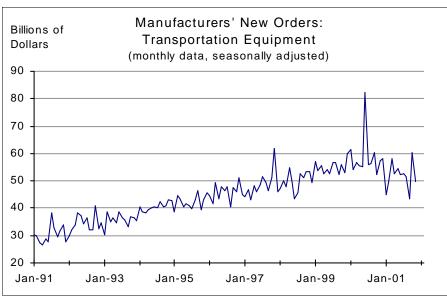
NOTES: New orders, as reported in the monthly Manufacturers' Shipments, Inventories, and Orders (M3) survey conducted by the U.S. Census Bureau, are net of order cancellations and include orders received and filled during the month as well as orders received for future delivery. Orders are defined to include those supported by binding legal documents such as signed contracts, letters of award, or letters of intent, although in some industries this definition may not be strictly applicable. See more details at http://www.census.gov/indicator/www/m3/m3desc.htm.

The Census Bureau released revised historical new orders data on May 21, 2001. This report reflects those revisions.

SOURCE: U.S. Department of Commerce, Bureau of the Census, available at: http://www.census.gov/indicator/www/m3/prel/index.htm.

Month-to-month changes in factory orders may affect demand for transportation services, including both domestic and international transportation of parts and other manufacturing inputs.

NEW ORDERS—TRANSPORTATION EQUIPMENT



Percent	Manufacturers' New Orders:
Change	Transportation Equipment (monthly data, seasonally adjusted)
60 —	(monthly data, seasonally adjusted)
50	
40	
30	
20	
10	$\pi M_{A}/M_{A} M_{A} M_$
-10	<u> </u>
-20	
-30	<u>'</u>
-40	
Jan-91	Jan-93 Jan-95 Jan-97 Jan-99 Jan-01

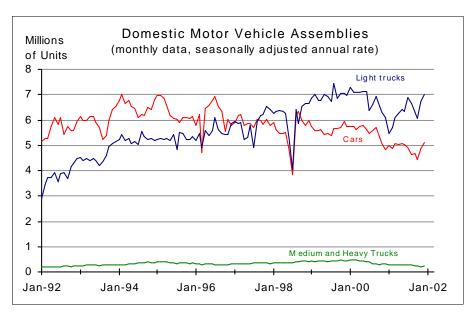
Manufacturers' New Orders	Oct-01	Nov-01
Transportation equipment (billions of dollars)	60.14	49.74
Percent change from previous month	38.97	-17.28

NOTE: The Census Bureau released revised historical new orders data on May 21, 2001. This report reflects those revisions.

SOURCE: U.S. Department of Commerce, Bureau of the Census, available at: http://www.census.gov/indicator/www/m3/prel/index.htm.

Month-to-month changes in new orders for transportation equipment indicate the level of investment in transportation and may indicate the industry outlook for transportation services. There can be a substantial time lag between ordering and delivery of equipment such as commercial airplanes and ships. New orders refer to orders placed with domestic producers of equipment.

MOTOR VEHICLE ASSEMBLIES



The motor vehicle industry is an important component of the manufacturing output of the United States. Over the previous four quarters (up to the Third Quarter of 2001), motor vehicle manufacturing accounted for 19.3 percent of all durable goods manufacturing in the United States. (NIPA table 1.3)

The domestic production level of motor vehicles is dependent on other factors beyond the domestic demand for motor vehicle transportation: Foreign trade is playing an increasingly important role in the domestic automotive market. The value in real terms (1996 dollars) of U.S. motor vehicle-related net imports increased from 50.7 billion dollars in 1992 to 114.2 billion dollars in 2000.

The production of medium and heavy trucks can be used as a gauge of commercial expectations from the standpoint of shipping capacity. Shippers may buy more road freight handling vehicles to expand capacity to meet an expected increase in demand. Light trucks and cars are used primarily for personal transportation. The production of light trucks has grown the most since 1992. Income growth over the past decade has helped drive consumer demand for more expensive personal transportation like SUV's and trucks.

Motor Vehicle Assemblies	Nov-01	Dec-01
Light Trucks (millions of units)	6.73	7.00
Percent Change from Previous Month	11.35	4.01
Cars (millions of units)	4.86	5.11
Percent Change from Previous Month	9.81	5.16
Medium and Heavy Trucks (millions of units)	0.20	0.22
Percent Change from Previous Month	-11.06	9.95

NOTES: The dip in assemblies in mid-1998 was caused by a strike at General Motors in June and July.

An assembly is equal to the assembly of the entire vehicle.

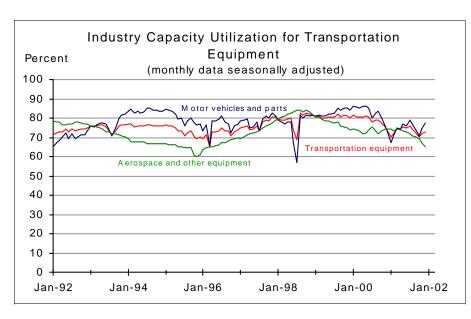
Seasonal factors and underlying data for car, light truck, and medium and heavy truck production are available on the Board's web site: http://www.federalreserve.gov/releases/G17/mvsf.htm.

Data from September to December 2001 are preliminary.

SOURCE: Federal Reserve, "Industrial Production and Capacity Utilization" Statistical Release; Jan. 16, 2002; available at: http://www.federalreserve.gov/releases/g17/download.htm.



INDUSTRY CAPACITY UTILIZATION — TRANSPORTATION EQUIPMENT



Industry capacity utilization rates measure the potential for short-term expansion and the intensity of current production given currently available capital. Short-term changes in utilization reflect changes in demand and the availability of labor. In the long-run, firms may adjust the amount of capital due to persistent changes in utilization rates.

Industry Capacity Utilization (percentage)	Nov-01	Dec-01
Capacity Utilization for Vehicles and Parts	74.40	77.30
Percent Change from Previous Month	5.22	3.90
Capacity Utilization for Transportation Equipment	71.59	72.58
Percent Change from Previous Month	1.95	1.38
Capacity Utilization for Aerospace and Other	67.20	65.27
Percent Change from Previous Month	-3.12	-2.88

NOTES: These data are for the industries with the following Standard Industrial Classification codes: Transportation equipment (37), Motor vehicles and parts (371), and Aerospace and miscellaneous transportation equipment (372-6,9). The latter two consist of three-digit industrial classifications which are components of the two-digit industry classification.

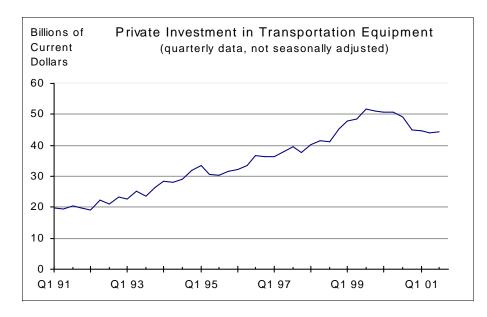
The Federal Reserve Board constructs estimates of capacity and capacity utilization for industries in manufacturing, mining, and energy. The Federal Reserve Board's capacity indices are designed to quantify the concept of sustainable maximum output within a given industry. Sustainable maximum output is the highest level of output that a plant can maintain within the framework of a realistic work schedule, taking both into account normal downtime and assuming sufficient availability of inputs to operate the capital in place. (A more detailed description of the data is available at: http://www.federalreserve.gov/Releases/G17/)

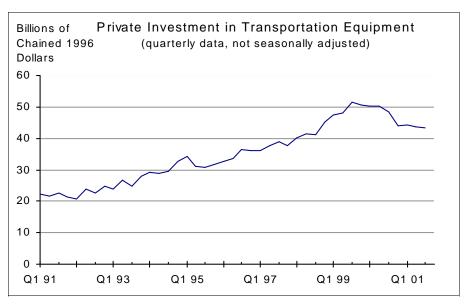
Data from September to December 2001 are preliminary.

SOURCE: Federal Reserve, "Industrial Production and Capacity Utilization" Statistical Release; January 16, 2002; available at: http://www.federalreserve.gov/releases/g17/download.htm.



BUSINESS INVESTMENT IN TRANSPORTATION EQUIPMENT





Private Investment in Transportation	Q3 00	Q3 01
Current dollars (billions) Percent change from same quarter previous year	49.30 <i>-4.5</i> 5	44.43 -9.89
Chained 1996 dollars (billions) Percent change from same quarter previous year	48.30 -6.03	43.50 -9.94

NOTES: The current value is compared to the value from the same period in the previous year to account for seasonality.

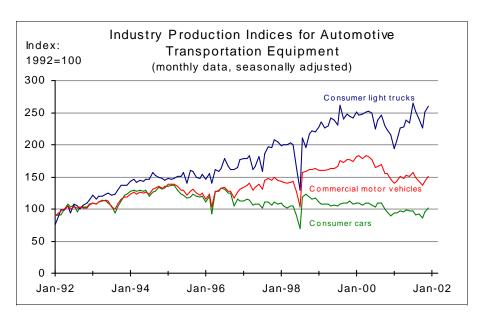
Private investment in transportation equipment (PITE) and manufacturers' new orders for transportation equipment (NOTE) both measure business demand for transportation equipment. However, they differ from each other in the following aspects.

- (1) Actual vs. potential: PITE is the actual expenditures spent on transportation equipment by business in the concerned time period, while NOTE is the net of orders and cancellations and include orders received and filled during the concerned time period as well as orders received for future delivery, which are subject to cancellation.
- (2) Domestic vs. international: PITE is expenditures spent by domestic business on purchasing transportation equipment, while NOTE includes orders from other countries.
- (3) Producer vs. purchaser: NOTE is orders to transportation equipment manufacturers and is measured in producer's price, while PITE is purchasers' expenditures on transportation equipment and is measured in purchaser's price, which includes transportation cost, trade margin, and excise tax, in addition to producer's price.

SOURCE: U.S. Department of Transportation, Bureau of Transportation Statistics estimates based on U.S. Department of Commerce, Bureau of Economic Analysis, *Survey of Current Business*, January 2002, NIPA Tables 5.4 and 5.5.

Private investment indicates the level of demand anticipated by industry; therefore, it can be considered a leading indicator for transportation capacity and supply. The data cover both domestically produced and imported equipment.

INDUSTRY PRODUCTION INDICES FOR AUTOMOTIVE TRANSPORTATION EQUIPMENT



An industry production (IP) index is a measure of the output of a specified manufacturing, energy, or mining industry relative to a level of output (in terms of units) produced in the past.

Industries will expand or contract production to meet demand. For example, the demand for consumer light trucks has risen dramatically over the past ten years relative to demand for consumer cars. The current level of consumer light truck production is more than twice the level in 1992.

Nov-01	Dec-01
251.50	259.57 3.21
143.58	3.2 <i>1</i> 151.24
5.43	5.33
94.73 9.02	101.09 <i>6.7</i> 2
	251.50 11.06 143.58 5.43

NOTES: These numbers represent three components of Standard Industrial Classification grouping for motor vehicles (371). The figures for selected non-automotive industries (372-6,9) are on the page entitled "Industry Production Indices for Non-Automotive Transportation Equipment."

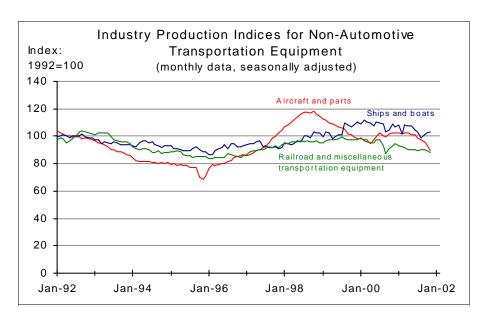
The dip in assemblies in mid-1998 was caused by a strike at General Motors in June and July.

Data from September to December 2001 are preliminary.

SOURCE: Federal Reserve, "Industrial Production and Capacity Utilization" Statistical Release; Jan. 16, 2002; available at: http://www.federalreserve.gov/releases/g17/download.htm.



INDUSTRY PRODUCTION INDICES FOR NON-AUTOMOTIVE TRANSPORTATION EQUIPMENT



An industry production (IP) index is a measure of the output of a specified manufacturing, energy, or mining industry relative to a level of output (in terms of units) produced in the past.

Industries will expand or contract production to meet demand or expected demand. Actual demand is seen in high cost equipment that is often ordered directly from the manufacturer or an intermediary. Aircraft, commercial shipping watercraft, and rail equipment usually already have a buyer before fabrication starts. Lower-priced equipment reflects expected demand. This includes products like consumer watercraft, motorcycles and bicycles, and camping equipment.

Industry Production Index (1992=100)	Oct-01	Nov-01
Production Index of Ships and Boats	102.56	103.12
Percent Change from Previous Month	1.81	0.55
Production Index of Aircraft and Parts	94.05	89.83
Percent Change from Previous Month	-1.93	-4.49
Production Index of Rail and Other	89.43	88.25
Percent Change from Previous Month	-1.13	-1.32

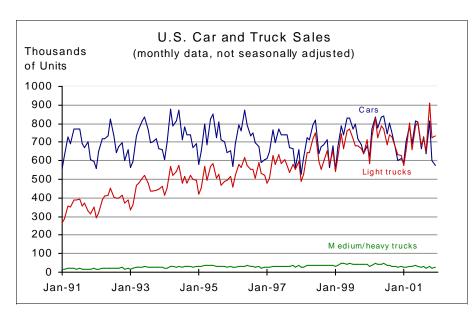
NOTES: These numbers represent the following Standard Industrial Classification groupings: Aircraft and parts (372), Ships and boats (373), and Rail and miscellaneous transportation equipment (374-6,9). Automotive industries (371) are on the page entitled "Industry Production Indices for Automotive Transportation Equipment."

Data from August to November 2001 are preliminary.

SOURCE: Federal Reserve, "Industrial Production and Capacity Utilization" Statistical Release; Jan. 16, 2002; available at: http://www.federalreserve.gov/releases/g17/download.htm.



RETAIL SALES OF MOTOR VEHICLES



Car and truck sales can be seen as an indicator of future demands to be placed on transportation infrastructure. Trends in sales for particular types of vehicles may also have implications for safety, energy usage, air pollution, and other matters. For example, the sale of light trucks has grown to match and in certain months even exceed the level of car sales in recent years.

U.S. Car and Truck Sales	Dec-00	Dec-01
Light trucks Percent change from same month previous year	629,556 -12.00	735,731 <i>16.87</i>
Cars Percent change from same month previous year	610,774 <i>-10.17</i>	574,445 -5.95
Medium/heavy trucks Percent change from same month previous year	30,853 -31.71	26,033 -15.62

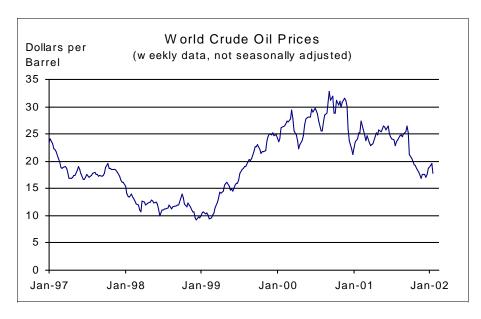
NOTES: The current value is compared to the value from the same period in the previous year to account for seasonality.

Light trucks include pickup trucks, sport utility vehicles, vans, and minivans.

SOURCE: Lisa Smith, Ward's AutoInfoBank, 3000 Town Center Drive, Southfield, Michigan 48075.



WORLD CRUDE OIL PRICES

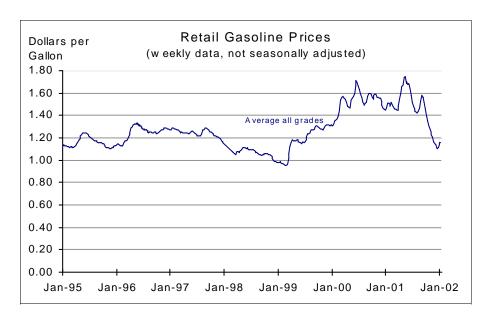


The world price of crude oil is the most important factor influencing domestic motor fuel prices, since oil imports make up more than half of the U.S. oil supply. Motor fuel prices, in turn, directly affect the cost of transportation. Increases in transportation costs caused by higher world crude oil prices are pure additional costs in the sense that U.S. citizens do not generally benefit.

World Crude Oil	4-Jan-02	11-Jan-02
Price (dollars per barrel)	19.14	19.55
Percent change from the previous week	2.41	2.14

SOURCE: U.S. Department of Energy, Energy Information Administration, Crude Oil Watch, as of January 2002, available at: http://www.eia.doe.gov/pub/oil_gas/petroleum/data_publications/crude_watch/current/pdf/crude.pdf

MOTOR FUEL PRICES



Dollars per Gallon			-	-	I Prices adjusted)		
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1.00			m /m	~~~~	/ 		
0.60							
0.00 Jan-95 Jar	n-96 Jai	1 n-97	Jan-98	Jan-99	Jan-00	Jan-01	

Retail Gas Prices	7-Jan-02	14-Jan-02
Average all grades (dollars/gallon)	1.152	1.152
Percent change from previous week	1.32	0.00

SOURCE: U.S. Department of Energy, Energy Information Administration, Weekly Retail Gasoline Prices, as of January 17, 2002, available at: http://www.eia.doe.gov/oil_gas/petroleum

Retail On-Highway Diesel Prices	7-Jan-02	14-Jan-02
Retail on-highway diesel prices (dollars/gallon)	1.168	1.159
Percent change from previous week	-0.09	-0.77

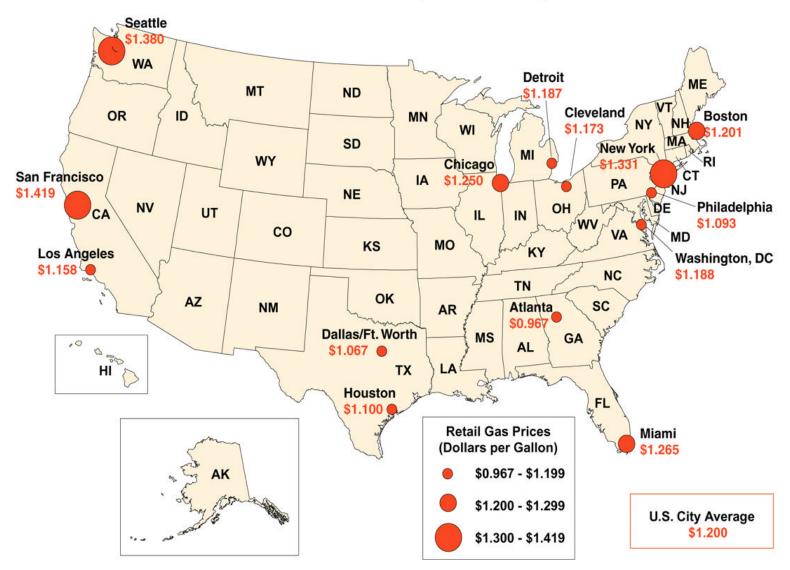
SOURCE: U.S. Department of Energy, Energy Information Administration, Weekly On-Highway Diesel Prices, as of January 17, 2001, available at: http://www.eia.doe.gov/oil_gas/petroleum.

Motor fuel prices are an important cost component of highway transportation. Changes in motor fuel prices impact the behavior of both producers and consumers, and affect the demand for transportation in terms of level and modal mix.

In the United States, motor gasoline prices follow world crude oil prices more closely than motor diesel prices. Changes in motor fuel prices affect the profit margin of transportation firms, particularly trucking firms.

There are regional differences in motor fuel prices, as the following maps illustrate.

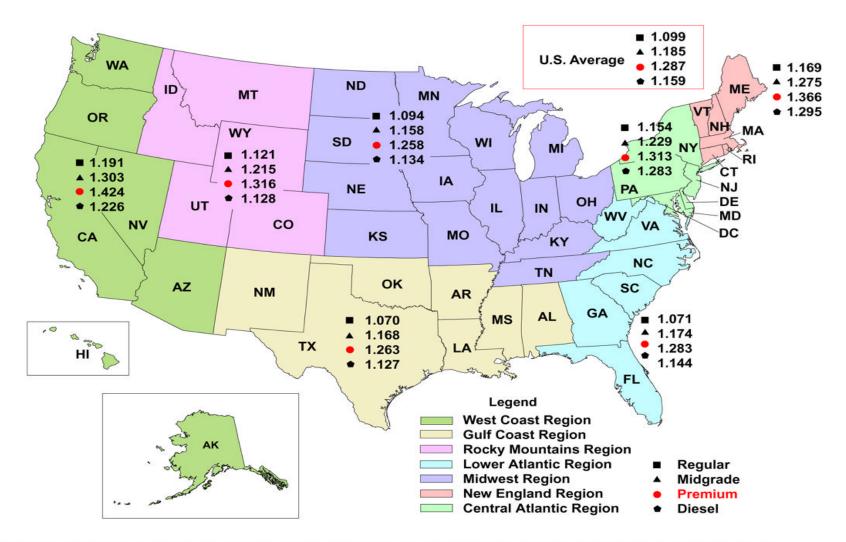
Retail Gasoline Prices of Selected Metropolitan Areas, December 2001



SOURCE: U.S Department of Labor, Bureau of Labor Statistics, "Price & Living Conditions: Average Price Data." http://www.bls.gov/data/home.htm.



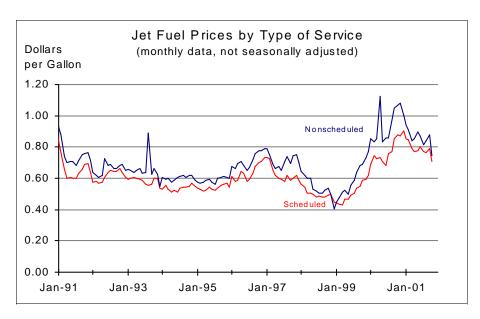
Regional Retail Motor Fuel Prices as of January 14, 2002



SOURCE: U.S. Department of Energy, Energy Information Administration, "Retail Gasoline Prices" and "On-Highway Diesel Prices." Internet site: http://www.eia.doe.gov/oil_gas/petroleum/special/gasoline_update/market_summary.html



DOMESTIC UNIT PRICES FOR AIRLINE JET FUEL



Jet fuel prices reported to the Bureau of Transportation Statistics differ from producer prices. Reports to BTS show the cost per gallon of fuel, excluding taxes, used by domestic large certificated carriers during the month rather than the price charged by a producer on a single day. Fuel costs for scheduled airline services reflect contractual and storage advantages available to large buyers, while fuel costs for nonscheduled airline services reflect economic conditions for smaller buyers. Jet fuel prices also reflect seasonality due to both the seasonality of aviation and because jet fuel has similar refining requirements to heating oil.

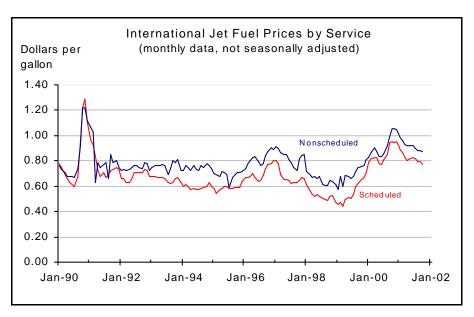
Current Dollars per Gallon	Oct-00	Oct-01
For nonscheduled airlines Percent change from same month previous year	1.06 <i>54.74</i>	0.75 -29.90
For scheduled airlines Percent change from same month previous year	0.88 <i>50.16</i>	0.71 -19.50

NOTES: The current value is compared to the value from the same period in the previous year to account for seasonality.

Data for July 2001 to October 2001 are preliminary due to late reports by carriers.

SOURCE: U.S. Department of Transportation, Bureau of Transportation Statistics.

INTERNATIONAL UNIT PRICES FOR AIRLINE JET FUEL



International jet fuel prices reflect both domestic and foreign purchases consumed in international routes by U.S. carriers.

Jet fuel prices reported to the Bureau of Transportation Statistics differ from producer prices. Reports to BTS show the cost per gallon of fuel, excluding taxes, used by domestic large certificated carriers during the month rather than the price charged by a producer on a single day. Fuel costs for scheduled airline services reflect contractual and storage advantages available to large buyers, while fuel costs for nonscheduled airline services reflect economic conditions for smaller buyers. Jet fuel prices also reflect seasonality due to both the seasonality of aviation and because jet fuel has similar refining requirements to heating oil.

Current Dollars per Gallon	Oct-00	Oct-01
For nonscheduled airlines Percent change from same month previous year	1.06 39.47	0.87 -17.92
For scheduled airlines Percent change from same month previous year	0.95 <i>46.15</i>	0.77 -18.95

NOTES: The current value is compared to the value from the same period in the previous year to account for seasonality.

Data for July 2001 to October 2001 are preliminary due to late reports by carriers.

SOURCE: U.S. Department of Transportation, Bureau of Transportation Statistics.



VALUE OF U.S. IMPORTS AND EXPORTS

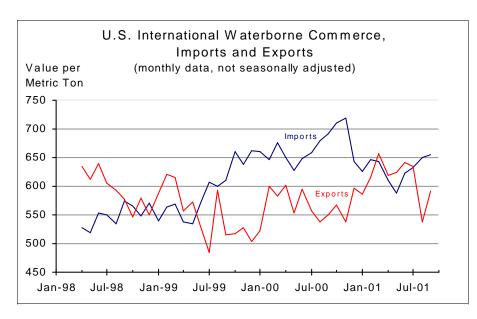


International trade represents a growing share of the U.S. economy. Changes in the level of both imports and exports affect the level of demand for transportation services. The value of U.S. imports historically have been higher than the value of U.S. exports, but the gap has widened in recent years.

U.S. International Trade In Goods	Sep-01	Oct-01
Imports (millions of dollars) Percent change from previous month	91,128 <i>-2.6</i> 5	91,575 <i>0.4</i> 9
Exports (millions of dollars) Percent change from previous month	55,597 -6.61	56,584 1.78

SOURCE: U.S. Department of Commerce, Bureau of the Census, Foreign Trade Division data, available at: http://www.census.gov/foreign-trade/www/statistics.html.

VALUE PER METRIC TON OF U.S. WATERBORNE IMPORTS AND EXPORTS



Approximately 40 percent by value (75 percent in terms of tonnage) of cargo carried in U.S. foreign trade is carried on the water.

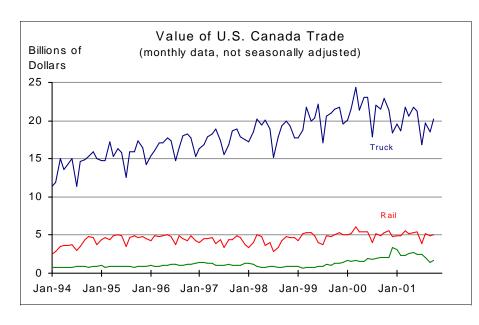
Value Per Metric Ton	Sep-00	Sep-01
Exports	549	591
Percent change from same month previous year	6.56	7.57
Imports	692	654
Percent change from same month previous year	13.29	-5.38

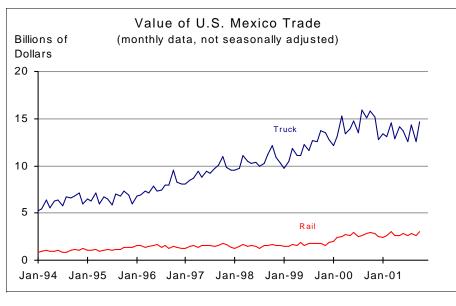
NOTES: The current value is compared to the value from the same period in the previous year to account for seasonality.

Data reported prior to the 3rd quarter of 1998 were collected and reported by the U.S. Department of Commerce and may not be completely comparable to data reported by the Maritime Administration.

SOURCE: U.S. Department of Transportation, Maritime Administration, Waterborne Databank, and U.S. Department of Commerce, Bureau of Census, Foreign Trade Division, U.S. Waterborne Exports and General Imports, various issues, available at http://www.marad.dot.gov/statistics/usfwts/index.html.

U.S. SURFACE TRADE WITH CANADA AND MEXICO





U.S Canada Trade	Oct-00	Oct-01
Truck (millions of dollars) Percent change from same month previous year	22,867 <i>6.65</i>	20,248 -11.45
Rail (millions of dollars) Percent change from same month previous year	5,310 <i>5.65</i>	5,105 -3.85
Pipeline (millions of dollars) Percent change from same month previous year	2,072 60.60	1,716 -17.15

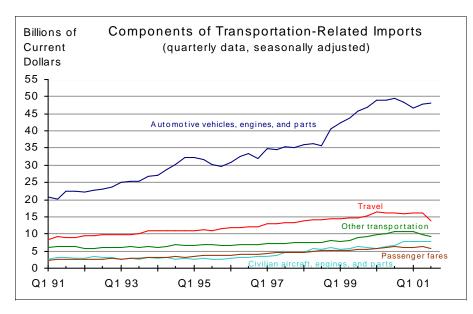
U.S Mexico Trade	Oct-00	Oct-01
Truck (millions of dollars) Percent change from same month previous year	15,859 <i>15.4</i> 8	14,689 <i>-7.3</i> 8
Rail (millions of dollars) Percent change from same month previous year	2,992 68.84	3,067 2.51
Pipeline (millions of dollars) Percent change from same month previous year	30 181.88	29 -1.21

NOTE: The current value is compared to the value from the same period in the previous year to account for seasonality.

SOURCE: Data obtained from the U.S. Department of Commerce, Census Bureau by the U.S. Department of Transportation Bureau of Transportation Statistics, Transborder Surface Freight Dataset, available at: http://www.bts.gov/ntda/tbscd/prod.html.

Surface freight is useful in monitoring the value and modal patterns of trade with Canada and Mexico, our North American Free Trade Agreement (NAFTA) partners. Canada is our largest trading partner, while Mexico now ranks second. Surface modes include not only truck, rail, and pipeline (shown here), but also government mail and other miscellaneous modes.

VALUE OF TRANSPORTATION-RELATED IMPORTS



The transportation sector's trade balance has been negative for many years. The strong growth of imports, together with much slower growth of exports, have increased the transportation-related trade deficit.

Imports (billions of dollars)	Q2 01	Q3 01
Transportation-related Total	88.13	84.40
Percent change from previous quarter	1.09	-4.23
Automotive and Parts	47.83	48.00
Percent change from previous quarter	2.35	0.37
Travel	16.25	13.73
Percent change from previous quarter	0.46	-15.54
Other	9.83	9.15
Percent change from previous quarter	-6.65	-6.87
Civilian Aircraft and Parts	7.78	7.68
Percent change from previous quarter	0.32	-1.29
Passenger Fares	6.45	5.85
Percent change from previous quarter	7.50	-9.30

NOTES: "Other transportation" imports include payments for freight transportation services and port services.

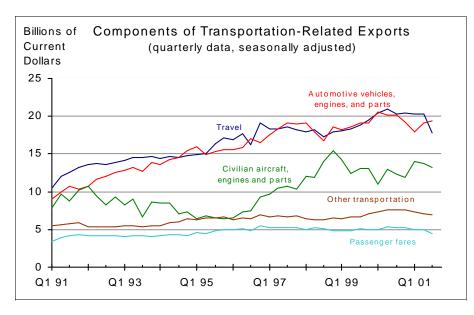
Passenger fares include international transportation fares, particularly, air fares and ocean liner fares.

Travel includes intercity and local fares within a country, hotel and restaurant, admission fees, and souvenir expenditures.

SOURCE: U.S. Department of Commerce, Bureau of Economic Analysis, *Survey of Current Business*, December 2001, NIPA Table 4.3.



VALUE OF TRANSPORTATION-RELATED EXPORTS



Transportation-related exports contribute to U.S. GDP and employment, which help retain the U.S. industrial base.

Exports (billions of dollars)	Q2 01	Q3 01
Transportation-related Total	65.15	61.80
Percent change from previous quarter	0.93	-5.14
Automotive and parts	19.08	19.35
Percent change from previous quarter	6.27	1.44
Travel	20.23	17.75
Percent change from previous quarter	-0.37	-12.24
Civilian Aircraft and Parts	13.78	13.28
Percent change from previous quarter	-1.78	-3.63
Other	7.10	6.98
Percent change from previous quarter	-3.40	-1.76
Passenger Fares	4.98	4.45
Percent change from previous quarter	1.02	-10.55

NOTES: "Other transportation" exports include payments for freight transportation services and port services.

Passenger fares include international transportation fares, particularly, air fares and ocean liner fares.

Travel includes intercity and local fares within a country, hotel and restaurant, admission fees, and souvenir expenditures.

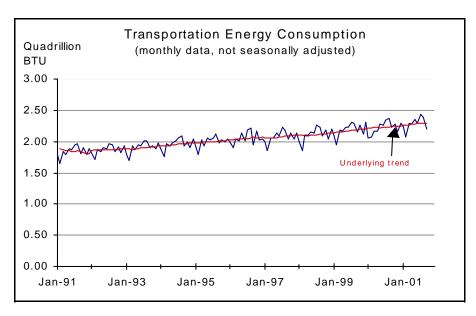
SOURCE: U.S. Department of Commerce, Bureau of Economic Analysis, *Survey of Current Business*, December 2001, NIPA Table 4.3.

Human and Natural Environment

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TRANSPORTATION ENERGY USE



Transportation accounts for about 28 percent of U.S. energy consumption. Petroleum accounts for nearly all (about 97 percent) of the transportation sector's energy use. Petroleum is a major component of transportation costs, and its usage affects the environment. Because more than half of the U.S. petroleum supply is imported, there are also national security concerns for assuring petroleum supplies.

Transportation Energy Consumption	Sep-00	Sep-01
Quadrillion BTU	2.22	2.20
Percent change from same month previous year	3.68	-1.17

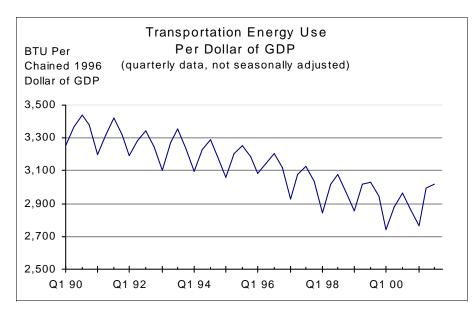
NOTE: The current value is compared to the value from the same period in the previous year to account for seasonality.

One quadrillion is equal to one billion million.

A trendline has been provided for transportation energy consumption. The trend has been calculated through a statistical procedure called Structural Modeling, in which the time series under study is decomposed into seasonal, trend and irregular components. For further information on this statistical procedure, see: S.J. Koopman, et al., *Structural Time Series Analyser, Modeller and Predictor* (STAMP), London: Timberlake Consultants Ltd. , 2000

SOURCE: U.S. Department of Energy, Energy Information Administration, *Monthly Energy Review*, available at: http://www.eia.doe.gov/mer.

TRANSPORTATION ENERGY USE PER DOLLAR OF GDP



BTU - British Thermal Unit

The average heat content of motor gasoline is 129,024 BTU per gallon. One quadrillion BTU is equivalent to 7.75 billion gallons of motor gasoline.

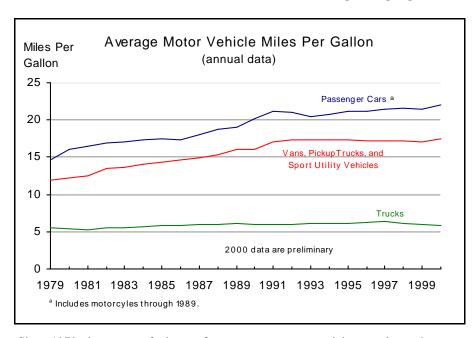
This indicator shows the level of energy use for transportation with respect to production of GDP and the levels of personal consumption in the United States over time. Transportation energy use reflects the seasonality of personal travel.

Transportation Energy Use Per \$ of GDP	Q3 00	Q3 01
Thousand BTU per Dollar of GDP	2,967	3,016
Percent change from same quarter previous year	-2.19	1.65

NOTE: The current value is compared to the value from the same period in the previous year to account for seasonality.

SOURCE: U.S. Department of Energy, Energy Information Administration, *Monthly Energy Review*, available at: http://www.eia.doe.gov/mer.

AVERAGE MOTOR VEHICLE MILES PER GALLON



Since 1979, the average fuel rate of passenger cars, vans, pickup trucks, and sport utility vehicles have had an upward trend. In the 1990s, the fuel rates reached a more stable trend, and are now better than a decade ago. In 2000, the fuel rate for passenger cars reached a historical high of 22 miles per gallon. The fuel rates for trucks have not changed significantly. (The average fuel rate is calculated by dividing fuel consumption by mileage of a motor vehicle.)

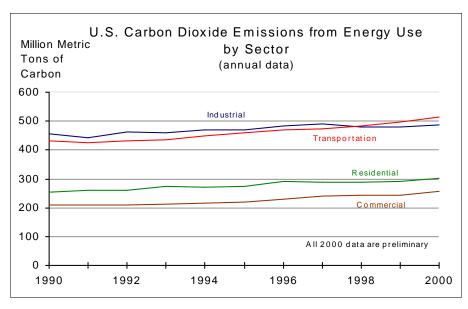
Average Motor Vehicle Miles Per Gallon	1999	2000*
Passenger cars Percent change from previous year	21.4 -0.93	22.0 2.80
Vans, Pickup trucks, SUVs Percent change from previous year	17.0 -1.16	17.5 2.94
Trucks Percent change from previous year	6.0 -1.64	5.8 -3.33

^{*} Preliminary estimates.

SOURCES: U.S. Department of Energy, Energy Information Administration, *Monthly Energy Review*. Available at http://www.eia.doe.gov/mer



U.S. CARBON DIOXIDE EMISSIONS



MMTC = million metric tons of carbon
Tons of carbon can be converted to tons of carbon dioxide by multiplying by 3.667.

Carbon dioxide is a major greenhouse gas emitted from the burning of fossil fuels.

The transportation sector surpassed the industrial sector's carbon dioxide emissions for the first time in 1998. Historically, the industrial sector was the largest emitter of carbon dioxide.

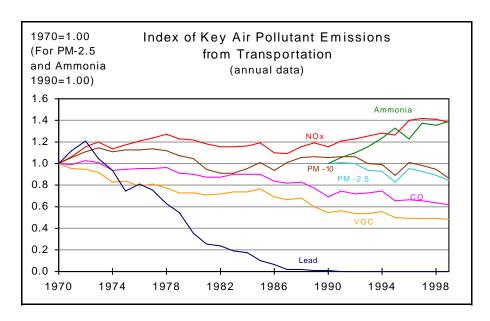
U.S. Carbon Dioxide Emissions	1999	2000*
Transportation (MMTC) Percent change from previous year	496 2.90	513 3. <i>4</i> 3
Industrial (MMTC) Percent change from previous year	481 <i>0.21</i>	488 1.46
Residential (MMTC) Percent change from previous year	290 0.35	301 3. <i>7</i> 9
Commercial (MMTC) Percent change from previous year	244 0.00	256 4.92

^{*} Preliminary estimates

SOURCES: U.S. Department of Energy, Energy Information Administration, *Emissions of Greenhouse Gases in the United States*, 1990-1999. Available at: http://www.eia.doe.gov/oiaf/1605/ggrpt/index.html. For 2000 numbers: U.S. Department of Energy, Energy, Information Administration, Energy-CO2 Flash estimate, available at: http://www.eia.doe.gov/oiaf/1605/flash/sld001.htm

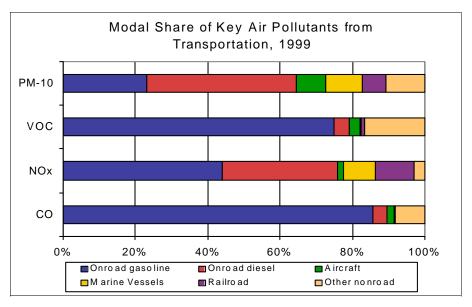


AIR POLLUTANT EMISSIONS FROM TRANSPORTATION



Thousands of Short Tons of Transportation Air Emissions	1998	1999
Carbon monoxide (CO)	58,108	55,773
Oxides of nitrogen (NOx)	11,522	11,306
Volatile organic compounds (VOC)	6,829	6,681
Particulate matter < 10 microns (PM-10)	475	458
Particulate matter < 2.5 microns (PM-2.5)	387	368
Ammonia	262	270
Lead	0.5	0.5

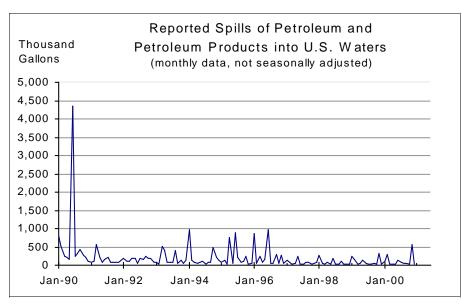
SOURCE: U.S. Environmental Protection Agency, Office of Air Quality Planning and Standards (OAQPS), National Emissions Inventory, available at: http://www.epa.gov/ttn/chief/index.html



Despite rapid growth in vehicle use over the past two decades, emissions of carbon monoxide (CO) and volatile organic compounds (VOC) have declined, and lead emissions have been almost eliminated, leading to improved air quality. There have been reductions in particulate emissions (PM) at the 10 micron classification. Only emissions of nitrogen oxides (NO_X) remain above 1970 levels. (Ammonia and PM-2.5 were added to the list of regulated pollutants recently.)

Onroad vehicles contribute the largest share of air pollutants among all modes.

CRUDE OIL AND PETROLEUM PRODUCTS SPILLS IN U.S. WATERS



NOTE: The spike in 1990 was caused by one tanker spill in the Gulf of Mexico.

Crude petroleum and petroleum products spills are costly to the environment and to society. Major oil spills are infrequent but can have large adverse impacts. Between 1995 and 1999, transportation was responsible for roughly 72 percent of the total gallons reported spilled. The remainder is from fixed facilities on and off shore; however, many of these facilities (such as marinas and ports) are transportation-related.

Data are only for reported spills. Unreported spills (such as from improper disposal of used motor oil into storm drains) also contribute to oil pollution, but the total volume of these spills is not known.

Oil Spills	Dec-99	Dec-00
Gallons spilled	26,796	21,056
Percent change from same month previous year	73.31	-21.42

NOTE: The current value is compared to the value from the same period in the previous year to account for seasonality.

Annual data from 1995 to 1999 were used to calculate the average percentage of transportation-related spills.

SOURCE: U.S. Coast Guard, Annual Data and Graphics for Oil Spills, available at: http://www.uscg.mil/hq/g-m

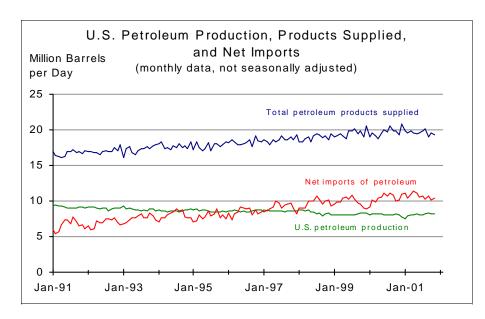


National Security

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U.S. DEPENDENCE ON OIL IMPORTS



The United States now imports more petroleum than it produces domestically. U.S. dependence on foreign sources for a product of such critical importance to the U.S. economy and society has prompted national security concerns.

NOTE: Petroleum products supplied is a proxy for consumption.

Total Petroleum Products Supplied	Nov-00	Nov-01
Total (thousand barrels per day)	19,328	19,300
Percent change from same month previous year	1.26	-0.14

Net Petroleum Imports	Nov-00	Nov-01
Total (thousand barrels per day)	10,201	10,431
Percent change from same month previous year	12.30	2.25

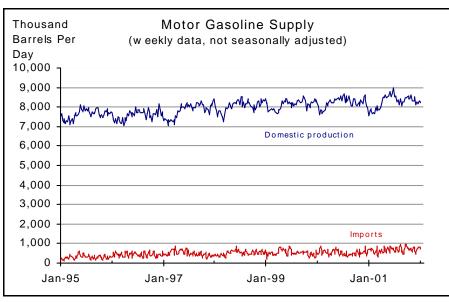
U.S. Petroleum Production	Nov-00	Nov-01
Total (thousand barrels per day)	8,089	8,220
Percent change from same month previous year	-2.24	1.62

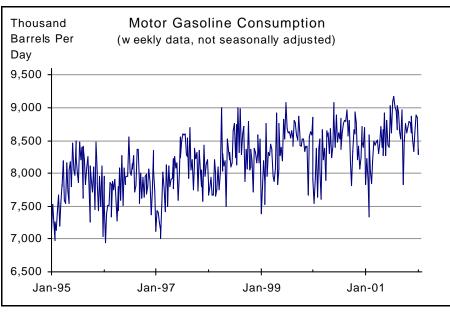
NOTE: The current value is compared to the value from the same period in the previous year to account for seasonality.

SOURCE: U.S. Department of Energy, Energy Information Administration, *Monthly Energy Review*, December 2001, Available at: http://www.eia.doe.gov/mer.



U.S. MOTOR GASOLINE PRODUCTION AND CONSUMPTION





Motor Gasoline Supply (thousand barrels per day)	4-Jan-02	11-Jan-02
Production from domestic sources Percent change from previous week	8,244 <i>-0.5</i> 8	8,238 -0.07
Imports Percent change from previous week	765 -6.25	728 -4.84

Motor Gasoline Consumption (thousand barrels per day)	4-Jan-02	11-Jan-02
Motor gasoline consumed	8,288	8,359
Percent change from previous week	-6.45	0.86

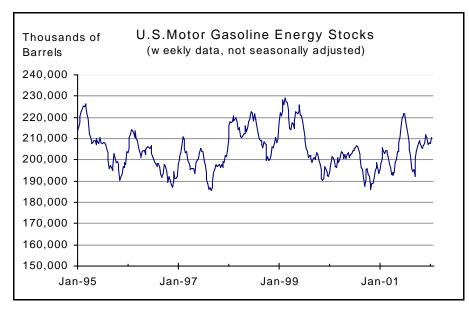
The consumption of motor gasoline in the United States is strongly seasonal, with more consumed in the summer and less consumed in the winter. On a yearly basis, the consumption of motor gasoline in the United States has been steadily increasing as vehicle-miles increased. In the week of June 29 this year, the consumption of motor gasoline reached a record high of 8.9 million barrels per day. Thereafter, the consumption has decreased. In the most recent reporting week (11-Jan-02), the consumption was 8.3 million barrels per day, 7 percent lower than its peak in June.

Motor gasoline (more than 90 percent) is refined domestically. Anticipating the strong demand in summer, the motor gasoline supply reached its historical high in the week of July 20 this year with an average of 9.2 million barrels per day. By the beginning of January, motor gasoline supply declined to 8.2 million barrels per day, almost 11 percent lower than July of last year.

SOURCE: U.S. Department of Energy, Energy Information Administration, *Weekly Petroleum Status Report*, January 2002, Available at: http://www.eia.doe.gov/oil_gas/petroleum/info_glance/gasoline. html



MOTOR GASOLINE STOCKS



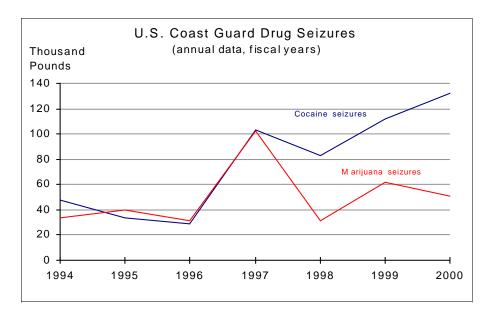
Motor gasoline supply and consumption are balanced through changes in motor gasoline stocks. Motor gasoline stocks in the United States, average about 200 billion barrels. The recent high of motor gasoline stocks was in the week of June 29 of this year, when the system prepared to meet higher demand in the summer. Since then the stocks have decreased. However, in the end of November motor gasoline stocks had increased to 212 billion barrels, the highest since the peak of June 29. In the beginning of January, motor gasoline stocks had decreased to 210 billion barrels.

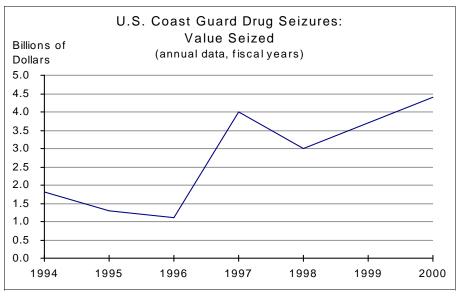
Motor Gasoline Stocks (thousands of barrels)	4-Jan-02	11-Jan-02
Stocks Percent change from provious week	207,726 -0.09	210,500 1.34
Percent change from previous week	-0.09	1.34

SOURCE: U.S. Department of Energy, Energy Information Administration, *Weekly Petroleum Status Report*, January 2002, Available at: http://www.eia.doe.gov/oil_gas/petroleum/info_glance/gasoline.html



U.S. COAST GUARD DRUG SEIZURES





Coast Guard Drug Seizures	1999	2000
Cocaine seized (thousand pounds) Percent change from previous year	112 <i>35.1</i> 8	132 18.62
Marijuana seized (thousand pounds) Percent change from previous year	62 95.94	50 -17.95

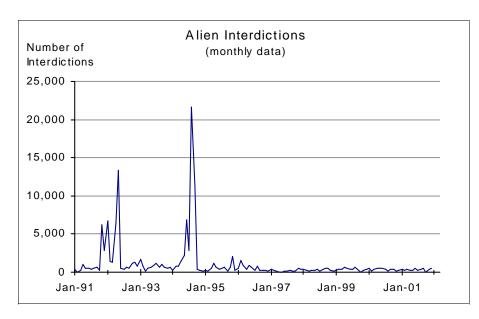
Coast Guard Drug Seizures	1999	2000
Value seized (billions of dollars)	3.70	4.40
Percent change from previous year	23.33	18.92

The U.S. Coast Guard is the key federal agency responsible for U.S. maritime drug interdictions. The Coast Guard's mission is to reduce the supply of drugs from the source by denying smugglers the use of air and maritime routes in the Transit Zone, a six million square mile area, including the Caribbean, Gulf of Mexico and Eastern Pacific. The Coast Guard is responsible for nearly 25 percent of all U.S. government seizures of cocaine and marijuana each year.

NOTE: During fiscal year 1997, additional Office of National Drug Control Policy (ONDCP) funding allowed the Coast Guard to commit more than 102,000 ship and aircraft resource hours to dedicated counter drug patrols -nearly 25 percent more than the previous year—accounting for the increase in seizures during that year.

 $SOURCE: \ U.S.\ Department\ of\ Transportation,\ U.S.\ Coast\ Guard,\ Office\ of\ Law\ Enforcement,\ at\ http://www.uscg.mil/hq/g-cp/comrel/factfile/.$

INTERDICTIONS OF ILLEGAL ALIENS



In recent years, most interdictions have involved people from Haiti, the People's Republic of China (PRC), the Dominican Republic, and Cuba. Recently, many interdictions have occurred in the Guam region. Guam is a gateway to the continental United States from the PRC.

NOTE: In May 1992, there were 13,103 Haitian interdictions. In August 1994, there were 21,300 Cuban interdictions.

Interdiction—the interception and stopping of illegal aliens attempting to enter the United States (in this case by water or air).

Alien Interdictions	Dec-00	Dec-01
Total	306	541
Percent change from previous year	-24.07	76.80

NOTE: The current value is compared to the value from the same period in the previous year to account for seasonality.

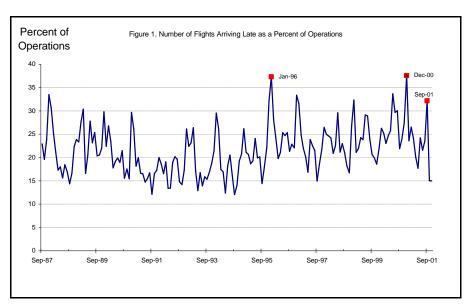
SOURCE: U.S. Department of Transportation, U.S. Coast Guard, Office of Law Enforcement, available at: http://www.uscg.mil/hq/g-o/g-opl/mle/amiostats1.htm.



A TIME SERIES ANALYSIS OF AIRLINE DELAY

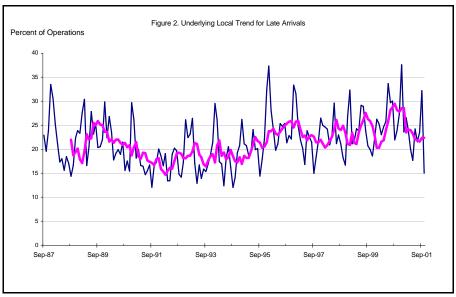
The issue of airline delays, as measured by the number of late arrivals as a percent of total operations, has been of increasing importance in recent years as more of the U.S. population chooses air travel as a preferred mode of transportation. The actions on September 11, 2001 may have temporarily lessened the desire to travel by air, so this analysis takes a look at airline delay as it is impacted by September 11, 2001.

Figure 1, which shows a time plot of the number of late arrivals over the past 13 years, brings to the forefront the problem of characterizing such delays. This monthly data set obviously exhibits strong seasonal variation, which makes it difficult to view an underlying trend. The purpose of this project is to clarify these time series characteristics of airline delay, by decomposing quantitatively the time series behavior into seasonal components, trend and interventions.



The time series for late arrivals, as noted in Figure 1, does highlight three significant interventions that have occurred since 1987: January 1996, December 2000, and September 2001. Statistically, the September 2001 impact has significantly more impact than the previous two interventions, particularly when taking into consideration that the level of airline delays had been decreasing over the past year.

Figure 2 provides the underlying trend for airline delays. There is no significant long term slope over the last 13 years. After the three extreme interventions have been removed (as noted in the previous graph), the long term trend tends to drift around the overall level equal to approximately 21% late arrivals over this period of time.



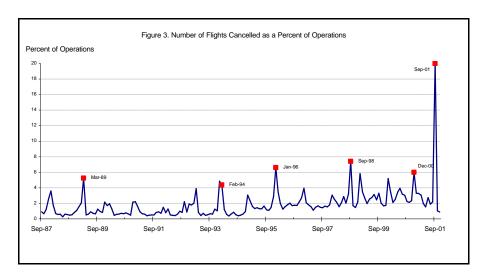
We may eventually see a more long term impact on airline delay due to events in September, but the present analysis only uses data through October 2001; the addition of more recent data to the analysis will hopefully reveal more on the long term impact on delays.

But we can also look at the impact of September 2001 on another aspect of ontime performance: cancellations. Figure 3 provides a graph of the number of flights cancelled as a percent of operations. As is obvious from the graph, the percent of flights cancelled in September 2001 far exceeds any other month over this 13 year period.

September 2001 is not the only significant intervention in the cancellation time series; it is, however, three times larger than any other intervention during this time period. After the large interventions have been accounted for, the underlying trend for the cancellation rate becomes relatively level, as shown in Figure 4.



A TIME SERIES ANALYSIS OF AIRLINE DELAY (continued)



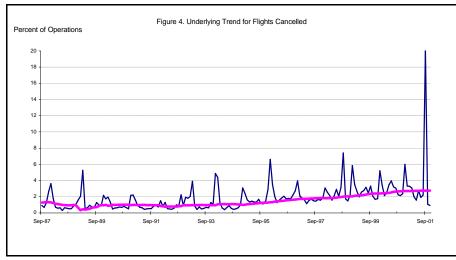


Figure 4 does highlight one key point: Once the seasonality has been removed from the data, the underlying trend does indicate a long term increase in percent of cancelled flights. This long term trend is calculated after the significant interventions have been removed, so this increase cannot be attributed to these occasional spikes. This slope is not large (approximately 0.15% per year), but it is significant.

A final note is made regarding the seasonality of the two time series. The seasonality for flight delays changes over time; Figure 5 provides the seasonal pattern for the four months that change the most over time. January, June and April all exhibit increasing delays over time, whereas March shows a decided decline. For cancellations, however, the seasonality is relatively stable over time. The average monthly deviation is shown in Figure 6. As expected, winter experiences the highest cancellations.

